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FREDERICK WHARTON MANN, M. D.,
AND
JOHN WILLIAM KEATING, M. D.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

MALARIA.*

By JOHN L. BRAY, M. D., Chatham, Ontario.

Fellow of the Royal College of Surgeons of Kingston; Member and Ex-President of the Council of the College of Physicians and Surgeons of Ontario; President of the Canadian Medical Association, etc.

Perhaps in no subject connected with medicine, have more theories been advanced, or divergence of opinion expressed, than in that of malaria, and I must confess that I know very little of its etiology after reading most of these theories, aided by an experience of nearly thirty years' practice in a malarious district. Scientists and investigators of the present day are approaching more nearly the solution of this knotty question.

It is a generally recognized and acknowledged fact that three things are necessary for the production of malaria; namely, heat, moisture and vegetable decompositon, and unless these three causes combine we can have no malaria.

Modern research has shown that vegetable decomposition of organic matter in the soil is due to the vital activity of living organisms, and we are indebted to such men as Laveran, Carter, Councilman, Sternberg, Osler and others for their original investigations and untiring efforts to solve this problem, and it is to them, and particularly the former, that something like a conclusion has been arrived at, that micro-organisms in the blood if not the cause of malaria, have an etiological relation to it, and are beyond a doubt a diagnostic mark of its presence in the system.

Laveran's theory has come to be the one generally accepted by the profession as communicated to the Paris Academy of Medicine in 1881 and 1882, and afterward published in 1884. He found in, as characteristic elements of, the blood of persons attacked with malaria—(1) Crescentic pigmented bodies; (2)

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

Pigmented bodies in the interior of the red corpuscles which underwent changes in form described as amœboid; (3) A pigmented flagellate organism.

The following brief summary of the important facts relating to these organisms, I take from a monograph by Osler; (1) In acute forms of malaria there exists within certain of the red corpuscles amœboid bodies usually pigmented, which undergo a definite evolution, increasing in size, gradually filling the entire corpuscle, and which prior to and during the chill undergo a remarkable segmentation. To this form the term "plasmodium malaria" has been given. There are also in some cases free pigmented bodies. Occasionally in acute forms flagellate bodies are seen free in the blood presenting from three to eight long actively moving cilia. According to Councilman these are much more common in blood withdrawn from the spleen; (2) In more chronic cases, particularly in the forms of remittent fever, which are so apt to be taken for typhoid, the corpuscles do not often present the intercellular forms, but there are remarkably ovoid, rounded and crescentic bodies deeply pigmented. These are, in all probability, related to and developed from intercellular forms. From certain of these, particlarly the ovoid and rounded forms, the flagellate bodies may be seen to develop.

We know these organisms are in the blood, but how they get there and from whence they come, is a question that to my mind is difficult of solution. Do they exist as elements of the blood and are only developed when persons are exposed to certain influences supposed to be of a malarial character, or are they on the other hand given off from the soil, the result of decomposition of organic matter and taken into the blood directly through the lungs, or are they taken into the stomach through the saliva or otherwise and thence to the intestines, where they undergo changes and enter the circulation through the lymphatics, there to develop as has been demonstrated in the red corpuscles?

I cannot but think that these malarial germs or organisms, or whatever they are, enter the system both by the lungs and stomach, or why do they produce as they often do, diarrhœa and dysentery in place of the typical intermittent or remittent fevers? My idea is that when this occurs the germs are carried directly into the stomach through the water we drink, or the saliva we swallow, and thus reach the intestines, in proof of which I quote Sternberg, who says: "The human intestine has a microscopic fauna and flora almost equal to a city gutter. The mouth, with its uniform temperature, free access of oxygen and constant supply of pabulum (the salivary secretion), is an admirable culture apparatus, hence therefore, there is constantly going on a struggle for existence among a number of minute parasites, most if not all of which are harmless, and the same may be said of the bacteria which habitually infest the human intestines. Then why should not other species whose normal habitat is external to the body, in swamps or elsewhere, when introduced into the intestines as they often must be in large numbers, give rise to special kinds of fermentation and to the production of special products which are not harmless."

Now, I am of the opinion that the malarial germ often takes this route and this is why we have diarrhœa and dysentery that can only be cured by clearing out the intestines, and giving quinine and other remedies, such as ipecac, opium, etc. These have had no curative action in my hands in the endemics of dysentery, undoubtedly malarial, that we sometimes have in the western district late in the season after a hot and dry summer when the well-water is low. This is one

very strong proof that these germs or organisms are carried to the intestines and there undergo changes which make them dangerous. On the other hand I think it clearly demonstrated that the germ which produces the plasmodium as found in the red corpuscles of the blood is taken directly into the lungs through the air we breathe, and enters the circulation, causing those typical cases of intermittent pneumonia, and aggravating and often producing periodical attacks of asthma.

Now, I am not going further into the consideration of the origin and development of these organisms. If I did I would only be giving you the opinion of others, as I have not investigated this part of my subject to such an extent as would warrant me in inflicting my views on you, and your time can be much better employed by looking into the works of Laveran, Councilman and Osler which are well worthy of perusal. Before considering the different types of malaria I would ask why do we have malaria in winter when the temperature is very low, if it depends on vegetable decomposition due to heat and moisture as no doubt it does? I have seen no theory advanced to account for this, and shall give you my own as expressed in a short paper read before the Sanitary Convention in London, in November, 1883. It is this: There are three great receptacles for the malarial poison, namely, the earth, the water, and the human body, that have a supply in store, as it were, laid up for the winter, which under favorable circumstances manifests itself in the shape of intermittent or other forms of malaria. The water in the wells is perhaps the greatest source of supply, particularly when the ground is frozen hard for a long time and the water gets low. The second reason is the poison escapes from under houses and spots of ground protected from the frost; and the third source is that some persons living in a malarious district have a continual supply in the system only waiting to be developed when it finds a good opportunity, such as exposure, sudden changes of temperature, over-fatigue, loss of rest, mental strain or anything else that will cause the system to run down, thus reducing and impairing the vital resistance of the nervous system. One very strong proof that these organisms are latent is that a man may have lived for fifteen or twenty years in a malarious section without ever having had ague or any other form of malaria, but let that man cross the Atlantic or go where malaria is unknown and he is liable to an attack of it. I have known many such instances which to me is a very strong proof of the latency of this germ in the blood or some of the organs of the human body.

It is true the type of malaria is milder in winter, and for the reason that the sources of supply are limited in comparison to summer, and is principally confined to localities where it is endemic; in other words, there is not enough escapes, for the winds to carry it to any distance in sufficient quantities to produce its pathological effects, if indeed it could survive the frosts it would have to encounter on its journey. This, then, is my theory as to why we have malaria in winter. It may be erroneous, but I think the investigations of Laveran and others as to the organisms found in the blood corpuscles gives strength to this view and if this is correct goes to show that these organisms are not only a diagnostic mark but also a factor in the production of malaria. Another reason that convinces me that these are stored up in the blood or organs is this: speaking from personal experience, a sudden fall of temperature in hot weather invariably brings on in me symptoms of malaria, such as lassitude,

stretching, yawning, aching of the muscles—particularly of the back, and neuralgia, which a few doses of quiuine will relieve in a short time. The same thing occurs in cold weather on a sudden rise of temperature, and I can only account for this by having stored up somewhere in my system a supply of these, I was going to say, infernal germs or organisms. I speak feelingly and I think with some weight as I have been a sufferer in this way for over a quarter of a century.

Now, as to types of malaria. We have the quotidian, tertian, quartan and intermittent forms. Why these different types should occur is hard to explain, nor has it hitherto been satisfactorily accounted for. This is a field well worthy of further study by our pathologists. By some it is claimed to be due to individual idiosyncracies, and they offer as proof of this that in a number of people exposed to the same malarial influences, we find one having quotidian, another tertian, and a third quartan ague, as is exemplified in individuals exposed to cold under identical circumstances, one will have pneumonia, another rheumatism, and a third diarrhœa. There may be some truth in this theory, but I think that temperature as well as the intensity of infection has more to do with the different types than has individual peculiarities. My experience and investigations have led me to believe that early in the summer we have the tertian and quartan forms; when the heat is great and the emanations from the soil reach their maximum intensity we have quotidian, double quotidian and remittent; later, when the temperature is lower and decomposition has almost ceased, we go back to the quartan and tertian varieties; and still later when the temperature gets much lower we have dysentery, the reason for which I will presently endeavor to explain.

My conclusions are, then, that it is more to temperature and date of intoxication that the different types are due than to individual idiosyncracies, in proof of which it is well known and shown by statistics that in India and other tropical countries, persons that go there who have hitherto been free from malaria will have the quotidian or remittent type, while those who have lived there for years and have been exposed to, and poisoned by malaria, will have relapses at longer intervals and then only when subject to exposure or sudden change of temperature. This is, I think, important, and goes to prove that date of infection and temperature have much to do with the character and type of malarial attacks, and my own observations bear out this view. Thirty years ago almost the only form of malaria prevalent in the western district was of the quotidian and remittent variety. The latter was called bilious or bilious-remittent fever, and the reason I assign for this is that the low country was almost constantly covered by water, undrained, and was being settled by emigrants who hitherto knew nothing of malaria. The land was being cleared and tilled allowing the germs to escape for the first time, so that those people got the full effect of the poison liberated from the virgin soil which had accumulated from the decayed and decaying organic matter, and as a consequence were attacked with regular old-fashioned shaking ague, that made the dishes on the table and the tins on the wall clatter. So much was this the case that it was no uncommon occurrence to find whole families laid up at once and at the same hours leaving no one to give another a drink of water. All this is now changed and we rarely, if ever, see a case of shaking ague, but have instead chill, fever, or

dumb ague, intermittent fever, neuralgia, diarrhœa, dysentery, malarial cough, lassitude, anæmia, heart murmurs, albuminuria and œdema simulating Bright's disease, hæmaturia, enlarged spleen, rheumatic pains and congestions of nearly all the organs, besides many other affections obscure in their nature but undoubtedly due to malarial organisms. Now, how is this change in the type of malaria to be accounted for? For nearly thirty years I have been a close observer of the changes that have taken place in the forms of malarial diseases that are endemic to this section, as well as of the climatic influences which affect the character of this poison, and to my mind there are three reasons for the change. The first and chief one is better drainage. The second is that the forests have been cut down and the country cleared up lessening the amount of organic decomposition, and the third one is that nearly all the virgin soil has been cultivated over and over again, thus liberating and getting rid of nearly all the organic matter that had been accumulating and stored up under the sod.

I said I would try and explain why dysentery should be produced by malaria after vegetable decomposition had ceased, and will now endeavor to do so. My explanation is this: Continued exposure to malaria engenders a cachectic state of the system by reducing the globular richness of the blood, and impairing the vital resistance of the nervous system, thus rendering its victims especially liable to attacks of specific febrile diseases and to splenic, hepatic, intestinal and other local congestions. One of the structures most liable to be affected is the mucous lining of the intestinal canal. Taking, then, the perverted state of the blood and tissues, the congested condition of the intestines, together with the malarial germs infesting the canal undergoing changes by fermentation and acting locally on the mucous lining as well as constitutionally through the blood, and we have made plain the reason why dysentery follows continued exposure to malarial influences, and why the mortality from this disease at such a time is far above what it would be if the malarial element had not existed.

We hear and read of typho-malarial fever. Now, I do not believe there is such a disease, and the name is a misnomer. A person may have malarial organisms in the system and at the same time be attacked with enteric fever. As a consequence there may be and often is a chill followed by a greater rise in temperature and then a remission, but never an intermission. On examining the blood of such a patient the plasmodium will be found. By giving a few good doses of quinine the chill is arrested, but the fever goes on and runs its regular course. Again, a person living in a malarious district having typhoid, when convalescing may be attacked with malaria owing to the perverted condition of the blood and impaired state of the nervous system due to the long illness and after the enteric fever proper has run its course, but in neither of these cases can this be properly called typho-malarial fever. The bacillus of typhoid and the organism of malaria are separate and distinct poisons, and are not produced from the same causes although they enter the body by the same channels, but it has yet to be proved that the germ that produces malaria will cause typhoid, or that the bacillus that attacks the mesenteric glands and Peyer's patches will induce malaria in any form, and I think the sooner we recognize this fact the better.

My observations have taught me that if we have a continued form of fever

withstanding quinine and mild laxatives, lasting over seven or ten days, we are safe in pronouncing it typhoid, and just here let me say, that the examination of the blood corpuscles in this class of cases is one of the most valuable diagnostic marks we possess. At the same time this alone cannot be relied on, particularly where malaria is endemic, for I have seen numbers of cases undoubtedly typhoid, where in the early stage the characteristic plasmodium was found in the blood but after giving quinine for a few days they disappeared, but the fever continued and proved to be enteric, and I would impress strongly on the profession the necessity of caution in giving a diagnosis in these cases. It is much better for the physician to say I cannot tell for a few days what course this fever will take, than to give a snap diagnosis and say that this is typhoid when in the course of a week the patient will be well and at work, or on the other hand say, "Oh! this is only a case of malaria," when it turns out to be typhoid. In this case he will try to square himself with the friends by saying it was malaria but has run into typhoid, or in the former instance take to himself great credit for cutting short and curing a case of typhoid in a week. I have met with examples of both cases more than once.

One more point, and I have done. It is this: Malaria, I am convinced, is not confined to certain localities as it was twenty or thirty years ago, but it is spread over nearly all parts of the country, and is much more general than is usually supposed, and this is a very important point that must not be overlooked. Why, you may ask, is this the case when you have already proved or tried to prove that in the home of malaria, by drainage and other means before mentioned, malarial diseases have greatly decreased. My answer is this: The very means (or some of them) taken for lessening the supply at the fountain head has, while accomplishing this object to a certain extent, caused it to be carried by wind, water and rail to the homes of thousands who before were strangers to this disease. The country having been cleared of its forests (themselves great consumers of these emanations) allow the winds to have free sweep wafting the germs miles and miles from their original lair. The water, in the new-made drains, carries the poison to streams and rivers to be used in many a household. The railways, conveying as they do, thousands of passengers long distances from the source of malaria, many of whom have these organisms latent in the body, which are only developed on reaching their destination owing to climatic changes or other causes, are great distributors of this disease, introducing it in this way to localities where perhaps hitherto it had been entirely unknown, and while the types of malaria are not so well marked as was the case when confined to certain districts (the poison being less concentrated), only makes its diagnosis more difficult, and often accounts for the seeming obscurity of many affections that puzzle and perplex the busy practitioner.

THE IDENTITY OF DIPHTHERIA AND MEMBRANOUS CROUP.*

By W. LYNN WILSON, M. D., Detroit, Michigan.

The question whether diphtheria and membranous croup be distinct diseases, is one which has occasioned much discussion, and concerning which there has been great difference of opinion.

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The majority of opinion seems to be in favor of regarding them as distinct diseases, and in the majority of text-books we find them described in separate articles, membranous croup being defined as a local disease, characterized by fibrinous inflammation of the upper air passages; diphtheria an infectious disease with, in certain cases, a similar localization of the fibrinous exudation. But on reading the articles we cannot help but be struck by the fact that the authors themselves are not very clear on the subject. Argument advanced in one paragraph is frequently contradicted in the next. For instance, Flint says: "It is an established fact that pseudo-membranous inflammations of the throat may be produced by the special poisons of various infectious diseases, as scarlet fever, measles, and small-pox." In the very next paragraph, we read: "A diphtheritic affection of the throat often occurs as an element of scarlatina, and the two diseases may exist in combination. This is the probable explanation of reported instances in which patients with scarlet fever apparently communicated diphtheria and *vice versa;*" and he then relates the case of a boy, aged four years, who had well-marked diphtheria and no eruption. After convalescence he became affected with complete hemiplegia and general dropsy. He had the sequels of both scarlatina and diphtheria following what appeared to be purely an attack of the latter, and he communicated to his sister scarlatina and not diphtheria.

Their names throw no light on the subject. The word croup is of Scotch origin, and signifies strangulation, a symptom in certain cases, common to both diseases. Diphtheria comes from a French word diphtherite, the significance of which relates to the most characteristic local event, the deposition of a false membrane, which likewise is a symptom of both affections. Let us now compare the two diseases, as described by most authors, in their anatomical characters, their etiology, pathology, clinical history, and the results obtained in their treatment.

Anatomically considered, a croupous exudation signifies a fibrinous false membrane, which rests loosely upon the mucous membrane without extending into its substance; the necrosis involving only the epithilial covering, while a diphtheritic exudate is a fibrinous false membrane, which is closely adherent to the mucous membrane, and cannot be stripped from it without loss of substance, the necrosis involving not only the epithelium, but also the superficial layers of the mucous membrane. These terms are used without any reference to the diseases known as croup and diphtheria, for in both these affections the exudation when seated in the trachea or lower portion of the larynx is of the croupous variety but, when seated on the tonsils, palate, or pharynx, of the diphtheritic variety, the difference appearing to depend on the kind of epithelium with which the parts are covered, the false membrane being readily separated from mucous membranes covered with cylindrical epithelium as in the bronchi, trachea, and greater part of the larynx, while on those covered with the laminated flat epithelium, as upon the tonsils, palate and pharynx, it is more adherent. In croup the larynx is by preference attacked, but it is usually accompanied by fibrinous exudation in the pharynx or the false membrane may first appear there and afterward invade the larynx. In diphtheria the tonsils, palate or pharynx are usually first attacked, but frequently the false membrane also invades the larynx, and in this case those who favor the duality of the diseases say that croup occurs as a complication of diphtheria, which appears to be irrational. If

it could be shown that croup invariably began in the larynx and was confined to that locality, or that when it invades the pharynx the membrane presented characters different from that of diphtheria in the same location, then it would be rational to consider the two diseases as distinct; but even those authors who consider them so, admit that essential points of difference in respect to their pathological anatomy have not as yet been established, and base their belief on alleged slight differences in their etiology and clinical history, all of which are susceptible of explanation.

The cause of diphtheria is not yet well established, but is supposed to be either the bacillus of Loeffler or the micrococcus of Oertel, probably the former, but as both these germs have been found in the membrane expectorated in cases of so-called croup, why should they not be considered as the cause of this disease also? The susceptibility to diphtheria is greatest between two and seven years of age, which is also true of croup. Diphtheria is more frequent during cold, moist, and changeable weather, and this also is the case with croup, the explanation probably being that in this kind of weather ordinary inflammations of the throat are most common and these may increase the readiness with which the diphtheritic virus gains entrance to the system. Those who favor the duality of these two diseases claim that diphtheria is contagious while croup is not, but I will cite a few cases which have convinced me that croup is contagious, and is frequently followed not only by other cases of croup but also by typical cases of diphtheria without invasion of the larynx.

A nurse at Grace Hospital while attending a patient who had been admitted as a case of membranous croup, and upon whom tracheotomy had been performed, was attacked by a well-marked case of diphtheria, the membrane covering the tonsils, palate and pharynx, but not extending to the larynx; and during convalescence she had various forms of diphtheritic paralysis. The brother of this child was also attacked by what appeared to be croup but was refused admission to Grace Hospital on account of their experience with the former case, and was sent to Harper Hospital. I saw the case with Dr. J. B. Kennedy and Dr. Carstens. The child was almost moribund; his face was cyanosed and abdominal respiration was marked. They agreed that tracheotomy was the only resort, and I accordingly performed the operation. The child expectorated a large amount of membrane as soon as the trachea was opened, and almost immediately revived. He subsequently made a complete recovery, but a few days afterward I was taken down myself with a typical case of diphtheria, which was followed by about every sequel that I have ever seen mentioned in any article on the subject, and at one time I was almost completely paralyzed in both the upper and lower extremities.

Only a short time ago I was called to a case which by reason of my former experience I unhesitatingly called diphtheria and told the people that the house would have to be placarded. They did not like this and called another physician who told them it was croup. On making another visit in the same locality shortly afterwards, I learned that the child had died, and I noticed that several houses in the immediate vicinity were adorned with diphtheria placards.

As regards their clinical history, it is urged that croup usually begins insidiously with the symptoms of a common cold and moderate fever, while diphtheria begins abruptly with a high fever; but I have noticed a number of cases of

diphtheria that were preceded by a catarrhal inflammation of the throat several days before the fibrinous exudate appeared.

The treatment of both diseases is equally unsatisfactory and I have not much faith in any particular medication. Emetics are certainly of some use but cannot be used often enough without causing depression. I rely chiefly on alcoholics in liberal quantity and concentrated nourishment, and if symptoms of suffocation occur, and the child's life is in danger from this cause, unhesitatingly perform tracheotomy or intubation, remembering that—

"Diseases desperate grown,
By desperate appliance are relieved."

I am aware that in a great many cases it makes very little difference whether the disease be called diphtheria or croup as far as the treatment is concerned, but the practical point that I wish to bring out in this paper is that these cases of so-called croup are contagious, and should be isolated; the house placarded and disinfected, as is done in cases of undoubted diphtheria, and I think that if this were done it would be a step gained toward preventing the spread of this dread disease.

INTUBATION OF THE LARYNX.*

By J. P. O'DWYER, M. D., Detroit, Michigan.

Intubation of the larynx, once introduced in this city, and practiced to a limited degree, has of late been almost forgotten, except by the few who have used it on an equal basis with tracheotomy. It, therefore, gives me great pleasure to bring before you one of the most brilliant operations of modern times, and I hope that it will at least receive the attention which it merits.

My object is to explain why the operation has not met with the favor here that it has at other places, and I will state here that it is due to the many badly made instruments, and not to the capable physicians who have performed it. This particular method of tubing the larynx is used the world-over, and as it has long since passed its experimental stage, needs no explanation. Since the introduction of the method I have seen many cases and was associated with the inventor during part of that time. I am in no way prejudiced, for I have faithfully used and studied both operations, intubation and tracheotomy, and am thoroughly convinced of the advantages and simplicity of the former, as well as its efficacy in overcoming every form of laryngeal stenosis. If the method is not worthy of being forwarded, it is not probable that it would be used to the extent that it is, both here and in Europe.

This operation was adopted for the benefit of mankind, and was never intended to be used as a means by which brilliant statistics could be acquired for its predecessor, tracheotomy. A few men take advantage of this fact and use intubation in their worst cases, as a sort of *preservative* for their elaborate statistics. I am not speaking from theory as I am personally acquainted with the scheme. This is not only defrauding the patient in a great many instances, but depriving the professon of the inherent advantages as well as discouraging them from the use of the method. Many physicians are lead to believe that

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this operation can be done by anyone with little difficulty, and I know of several who even went so far as to attempt it without previous work on the cadaver. This is not overestimated, and I am certain in saying that many deaths which have been reported as due to the pushing down of false membrane or some other erroneous cause, were due to asphyxia from prolonged efforts at introduction or from forcing a false passage.

I recently read an article on this subject by an eminent writer, and one whom I consider to be a good intubator. I am not questioning the ability of the man nor criticising his work, but merely wish to emphasize the following statement. Personal equation may be accountable for it, but I consider it wholly misleading to the average practitioner: "Any surgeon possessing a knowledge of the anatomy of the parts, and a good degree of surgical skill, will be able to easily and quickly introduce the tube, and to remove it when the proper time arrives." The author contradicts the statement in the same article and says that in attempting to remove the tube he " made a complete failure," and deferred the operation until the next day. We are all liable to encounter some accident or unusual difficulty, the solution of which entirely depends upon individual judgment and experience.

The literature of the subject has been greatly increased during the past two years. Among the most important articles are the able papers by Ranke, read before the International Medical Congress at Berlin, one by George M. Lefferts, read before the Tenth International Medical Congress, and many other papers, with reports of cases by O'Dwyer, Brown, Jennings, E. F. Ingals, Waxham and others. Ranke says that he was first lead to try the method in young children, but that he was afterwards induced, by the good results which he obtained to use it as the primary operation in all cases. He considers the risks of the operation, when done with the O'Dwyer instruments, much less than those of tracheotomy. In an article by Koch, he lends his preference to intubation in diphtheria, because it is more easily performed and offers better chances of after-treatment. In the same article he refers to a very interesting experiment regarding the comparative value of the two methods performed in the Kinder Krankenhaus, Amsterdam, where one hundred and forty-three cases required surgical intubation. These were operated upon alternately by intubation and tracheotomy, without regard to the nature of the case. Out of these the total number of recoveries was fifty-one or thirty-four and seven-tenths per cent. Of those tracheotomized thirty and three-tenths per cent. recovered, while of those intubated thirty-five and three-tenths per cent. recovered. Messrs. Pitts and Brooke (*Lancet*, January 17, 1891) give the statistics of the results of intubation in diphtheria from two hospitals in London.

At Victoria Hospital for Children: Sixteen intubated—seven cured, nine deaths (three secondary tracheotomies all fatal). Percentage of recoveries, forty-three.

At Saint Thomas's Hospital there were thirty cases operated upon. Of these eight had subsequent tracheotomy, four recovering. Of the twenty-two cases where intubation alone was employed, eight recovered. This is a percentage of forty on the whole number intubated. This is a very favorable showing as they consider twenty-five per cent of recoveries after tracheotomy good, in the same institutions. The percentage of recoveries after this operation for diphtheritic

croup is improving, owing, no doubt, to the instruments used. Ranke states that out of four hundred and thirteen cases operated upon in Germany, Austria, and Switzerland, thirty-four per cent. recoverd. Dillon Brown's reports show the recovery of thirty-seven and five-tenths per cent., and Waxham's about thirty-five per cent., while Fields, of Albany, New York, shows thirty-eight per cent. of recoveries out of one hundred cases.

The intubation tube is somewhat like the obstetric forceps, in that it is continually undergoing so-called improvements, every man considering his tube the best. This is certainly to be encouraged, if done in the right direction, and the men praised for their ingenious devices, but the physician should be able to discriminate between these and badly made instruments.

The O'Dwyer tubes consist of three sets—one for adults, containing ten tubes, two for children (one set composed of six tubes, the regular croup tubes, the second set containing seven tubes, to be used only for loose membrane or foreign bodies in the larynx). The main object in having the tube conform exactly with the larynx is to have sufficient air space with the least possible pressure, especially upon the vocal cords. The head of the tube is oval-shaped, and every part of it is rounded off and perfectly smooth. It is thrown back to the posterior surface of the tube in order to allow the epiglottis to close over the aperture and prevent ulceration. The hole for the thread passes vertically through the head, just to the left of its anterior edge. It should not open into the tube. No matter how carefully the upper end of the tube is made, there will be ulceration at the base of the epiglottis, due to pressure, if the tube is perfectly straight. The belly of the tube, called the "retaining swell," is to prevent the tube from being coughed out too easily. The anterior and posterior surfaces of the lower end of the tube are thick, thoroughly rounded and bevelled toward the obturator, otherwise it will cause ulceration from the up-and-down movement, which occurs during deglutition. The obturator must fit the tube accurately; the head must fit for some distance into the tube to prevent any wabbling, and its lower end must form a perfect probe-point with the tube. The lengths of the croup tubes are from one and one-half to two and five-eighths inches respectively. The antero-posterior diameter and the width at the point of the greatest swell correspond, namely, from seven-thirty-seconds to twelve-thirty-seconds of an inch respectively.

The "foreign-body" tubes are made of German silver and are all of the same length, namely, one and one-eighth inches. They are very light, the smallest weighing thirty-five grains, and the largest eighty-five grains. The head is small, and there is no retaining swell as it is held in position by pressure upon the narrow parts of the larynx. The tube is perfectly straight, as it was designed to remain in the larynx but a few hours. They are intended to fill the larynx to its full sub-glottic capacity. The many devices which have been used for the removal of loose membrane from the trachea and bronchi have failed, with the exception of this tube, which has solved part of the problem; the missing link is some means or device by which the membrane can be broken up and freed from its attachments. The sublimed calomel method, which I mentioned in my last paper upon this subject, discovered by Dr. J. Corbin, comes nearer the point than anything I am acquainted with. It is not always necessary to follow the scale in choosing the tube to use in any

particular case. In fact there is often a great advantage in using a larger or a smaller tube than is required by a given larynx. With good judgment, and a careful study of the case, the operator will know the proper course to pursue.

The "gag introducer and extractor" are of less importance, though great care is required in their construction. Dillon Brown states, in words which I cannot better, "That it is impossible for an instrument maker to copy a perfect tube, unless the details of its construction are explained to him, and then it is only with the greatest care that they succeed." Therefore it is not surprising that the great majority of tubes which are in use are imperfect and crude. Most of them will certainly do harm, and many of them will involve the life of the patient in great danger. These seem like strong terms, but they must seem very mild to those who understand the vast importance of having all the small details in the construction of the tubes made perfect, and who know how the country is being flooded with a great number of crude and imperfectly made instruments.

A physician once gave me a tube which he had obtained from a friend of his who was then doing considerable work in intubation. It certainly possessed more faults than any one tube I had ever seen; and the only wonder is that any of the patients recovered upon whom he had used such an instrument. The tube was perfectly straight, the head was not thrown back from the epiglottis, and its edges were as sharp and thin as a twenty-five cent piece, and the point of the obturator scarcely projected beyond the tube. I have seen few as bad as this, but there are many, which, if placed in the larynx, would do just as much damage, and I venture to say that the majority of tubes used should never be placed in the larynx. I will describe a few of the many so-called tubes.

The improved Tasher tube is objectionable because the head and lower end of the tube are sharp and present a cutting edge. This will naturally cause the tissues to swell over the head of the tube, and on account of the pressure exerted by the narrow parts of the larynx, it will certainly do damage if left in place long. Dr. Hoadley's tubes for deep tubing were intended, principally, to overcome the difficulty in feeding, but as Dr. Casselberry has absolutely obviated this fault by posture (in having the pharynx lower than the larynx), these special tubes are of little value. They are objectionable on account of being so short and resting so deep in the larynx, as swelling is very liable to take place over the head of the tube. The Stoerck tube is straight, held in position, not by a retaining swell, but by its great pressure against the sides of the larynx, and is sharp both above and below. The probe-point of the obturator is perforated, with the intention of allowing the patient to breathe during its introduction. I need not remark that this is a great fault and does away with the nice probe-point, so necessary in diphtheritic croup. The Sajous modification, on the bivalve principle, has never been used on the living subject to my knowledge. The principle was thoroughly tested by O'Dwyer, of New York, who found it to be a complete failure. The Thilo's tube possesses the same fault besides being cylindrical. The "artificial epiglottis," an ingenious device, first used by Waxham, increases the danger of asphyxia by acting as a valve, which cuts off inspiration, also by forming a nidus for the accumulation of secretions.

I wish to say a few words in regard to the advantages of the method in diphtheritic croup. (1) The friends are not frightened by the idea of an operation, and their consent is readily obtained. (2) It does not require an anæsthetic. (3) The operation may be done at a much earlier period if the operator see fit, without injury to the patient. (4) The avoidance of a fresh wound at the seat of the disease, and its accompanying hæmorrhage. (5) The great ease and rapidity of the operation. (6) The air before entering the lungs is warmed and filtered by passing through the natural passages. (7) The advantages of a skilled nurse are not so necessary in this as in tracheotomy. (8) The child can speak and ask for what it wants; this alone saves it much exhaustion. (9) The cough is full and explosive, and anything entering the bronchi is expelled. (10) There is no pocket left, favoring the absorption of toxic products, as after tracheotomy. I refer to the larynx, which is seldom cleansed, the attending physician or nurse finding it almost impossible to disinfect it.

There is a difference of opinion among physicians regarding the time to operate. As a matter of fact, it makes very little difference, except, probably, increasing the percentage of recoveries with the early operation. I do not favor early operation, and advise it only when the following symptoms present themselves. (1) Marked recession of the chest walls, namely, above the clavicles and sternum, over the diaphragm and the intercostal spaces. (2) Complete or partial loss of voice, with suppressed or muffled cough. (3) Urgent dyspnœa, with the loud stridor heard both on inspiration and expiration, with inspiration especially prolonged. (4) Cyanosis is uncertain and may or may not be present.

The most frequent cause of failure of intubation to avert a fatal issue is the extension downward of the pseudo-membrane. This is very difficult of diagnosis, and indeed many authors say its presence is made a certainty during life only by the coughing up of membranous casts of the bronchial tubes. I am certain that in many cases where the tube was supposed to have given no relief, the cause was due to the extension of membrane involvement, and whenever tracheotomy was done the result was invariably the same. It is with a desire of securing better results that I advocate this method so strongly, as the cause of death in this one disease (laryngeal diphtheria) without operation, is about ninety-five per cent., and as at least forty per cent. of these die from asphyxia caused by the occlusion of the laryngeal aperture by pseudo-membrane, by tumefaction of the mucous membrane, by spasm, by œdema of the glottis, or by the detachment of pieces of false membrane acting as valves. I cannot but hope that by the use of the proper instruments the physicians who have failed will succeed, and I think that the operation is worthy of a more extended trial than it has heretofore received in this city.

Report of Case.—I was called to see Mary M., aged three years, who was apparently suffering from croup. She was suffering from severe dyspnœa, stridulous respiration, loss of voice with croupy cough, and recession of the chest walls, especially above the clavicles. According to the parents she had been sick about twenty-four hours, no fever, and had vomited several times during this period, without relief. I gave two grains of turpeth mineral, which induced vomiting in the child, but without relief to the breathing. I was rather puzzled as the child kept getting worse. Inspection of the throat showed nothing. Digital

examination revealed a slight induration of the tissues around the epiglottis. I told the parents the nature of the case, and that I would have to place a tube in the throat. They readily consented. I inserted the three-four tube with some difficulty as I am certain the larynx was deformed. The relief was complete and the little one was soon as bright as ever. I could not get the child to whisper, which I thought very strange, and upon inquiring into the history of the case, I found to my great surprise that the child had never spoken. The family history was negative. There are two other children both of whom are healthy. The child was perfectly intelligent. Had had four convulsive seizures since birth. This child was apparently healthy in every other way, though considerably emaciated, and gave no history of an injury of any kind. I intubated it first on last Wednesday. I removed the tube yesterday. The dyspnœa had not returned since, though the child was not breathing as freely and easily as with the tube.

LECTURES.

EXCISION OF THE ENTIRE LOWER JAW.

By CHARLES B. NANCREDE, M. D., Ann Arbor, Michigan.
PROFESSOR OF SURGERY AND CLINICAL SURGERY IN THE UNIVERSITY OF MICHIGAN.

Gentlemen: The case I propose to bring before you to-day you will remember as the one I presented in the clinic last week. It is a rapidly developing malignant growth of the lower jaw in a man aged thirty-four. It was first noticed last July as an apparently bony growth, situated about the middle of the left half of the body of the jaw. It has not developed as a central myeloid tumor should, expanding the bone until only a thin shell remains, nor yet has it grown altogether like one of the periosteal variety. I have explained to the patient that if it was a central myeloid tumor and he did not die from the immediate effects of the operation, he would have a nearly certain chance of recovery and an excellent prospect of permanent relief, while if the growth proved to be one of the latter variety he could expect prolonged relief and some prospect of cure. The risk of the operation is considerable. Some hæmorrhage is unavoidable and may be severe when I remove the jaw, for the angle and ramus are in close relation with large vessels and in the dry dissection in this part they may be ruptured. If when the jaw is out he has lost no more than ten to twelve ounces of blood, I shall congratulate myself upon the result. If one of the large vessels of the neck is cut or torn, we shall probably eventually lose the patient from the effect of the shock and hæmorrhage—although not immediately.

After laying these facts before him, I have advised him to take the chance of an operation, and he has consented. I am only willing to operate because I have no right to refuse this man the chance of relief. If the patient dies from hæmorrhage, he will not do so here right before our eyes if my assistants are active in the performance of their duty, but he will not come out properly from under the influence of the anæsthetic, dying from exhaustion at any period from an hour to twenty-four. The internal maxillary artery lies close to the neck of the condyle in close relation to the external pterygoid muscle entirely out of sight, but readily enough cut or torn if I do not keep close to the bone. The

last time I removed a portion of the lower jaw, the gentleman assisting me, a prominent surgeon, while manipulating with his fingers in this region, tore some vessel, causing a most appalling hæmorrhage. I did not stop to discover what vessel was bleeding, but was fortunate in catching it almost immediately and the patient survived.

The history of this operation dates from the year 1810 when Deaderick first performed it in this country, and I am happy to say it was an achievement of American surgery. The first complete excision of the clavicle was performed by a young surgeon in the wilds of Kentucky. The first ovariotomy was performed in this country, and one of the first removals of the whole upper extremity was made in New Hampshire, in a little town containing at the present day only about six hundred inhabitants. Desault and Fisher, in the early part of this century, dissected out fragments of the lower jaw for gun-shot wound. In 1848 the whole lower jaw was removed by Blandin, a French surgeon. Professor Carrow, of this University, while in China, removed the whole lower jaw successfully for sarcoma.

There are four things which I wish to avoid in performing this operation: cutting the trunk of the facial nerve, for by so doing the ability to close the eyelid would be lost,—if I commence the incision three-fourths of an inch in front of, and one-half inch below the lobule of, the ear and cut down over the bulging portion of the tumor, I shall probably escape the nerve; second, I must avoid cutting the facial artery before tying it; third, and fourth, I must endeavor when removing the condyle, not to wound the internal maxillary or carotid arteries. I shall try to save the mucous membrane of the mouth until the last moment to prevent the blood entering the trachea, dissect the masseter up, strip off the internal pterygoid and bring the instrument out below the angle of the jaw. I shall then split the lip and dissect the tissues all the way back, cutting the mylo-hyoid muscle at its attachment to the bone, and first passing a ligature through the tip of the tongue to prevent the patient swallowing it and thus causing suffocation, I will next saw through the bone to the left of the symphysis, depress the jaw—being careful not to rupture the carotid or its internal maxillary branch—strip off the muscles from the temporal bone with strong periosteal elevators and disarticulate from the front without using the knife if possible. The vessels will then be secured and the wound packed with iodoform gauze. The bone which is deeply involved by the sarcomatous growth may snap across and cause bleeding from large veins in the tumor. If I cut too wide of the tumor I shall cut the large vessels of the neck; if I cut too closely I shall leave some of the growth behind. The patient is thin and badly nourished, and not in a condition to withstand the profound shock which would result from severe hæmorrhage. He has been continually swallowing the putrid discharge from the ulcerating tumor, and from the nature of its position we cannot hope to have an antiseptic or even an aseptic operation except in so far as the instruments are concerned.

In case much blood is lost, Esmarch bandages will be used on the limbs to keep the bulk of fluid in the circulation such that the heart can pump enough blood into the respiratory and cardiac nerve centres to maintain life, and normal salt solution will be injected into the cellular tissue—in reality a form of transfusion. I have made arrangements for Dr. Carrow to open the trachea in case this

becomes blocked by a clot of blood; we will, however, keep the patient only partially anæsthetized during the later stages of the operation to have the reflexes of his larynx in sufficiently good condition to cause him to expel any ordinary amount of blood.

[After Dr. Nancrede had made the incisions and dissection as above described, Dr. Dorrance, of the dental faculty, cut through the bone a little to the left of the symphysis with a circular saw on his dental engine, thereby making a much smoother surface than could be obtained by the usual means. A ligature was then passed through the tongue, and the jaw disarticulated with a most trivial loss of blood.]

You will see that I have nearly followed the plan that I laid out for myself, which is better than I expected to be able to do. Of course I have cut some of the branches of the facial nerve, but I find that I have not severed the main trunk; in case I had done so I should have sutured it. There is some hæmorrhage from the cut edge of the bone and I shall stop this with the cautery. I find that inadvertently a silk ligature has been tied around the internal maxillary artery and nerve; we will substitute a catgut thread, which will last but for a few days so that if even the nerve be included no permanent irritation will result.

I wish you to notice, now that the wound is coaptated, how little deformity there will be in comparison to what one would expect from such an extensive operation upon the face. A drainage tube will be introduced at the former site of the angle of the jaw to prevent the patient swallowing the discharges from the extensive raw surface. We will *not* take out the pins in forty-eight hours; we must risk some scarring rather than have the wound break open, for there is no bony support, you know. The tongue will have to be held outside for a few days until the tissues unite so that the patient requires control of it.

[The wound promptly healed without much reaction, but at the end of seven weeks the patient returned with the whole side of the face and floor of the mouth occupied by a large sarcomatous growth. Dr. Nancrede then removed what remained of the lower jaw, disarticulating as was done upon the other side, after which he removed all the circumjacent tissues, including the whole floor of the mouth, cutting wide of all apparently diseased tissues. Prompt recovery again ensued. No report has been since obtained as to the permanence of the cure. The deformity was not as marked as might, *a priori*, be supposed, while his speech was excellent.]

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, NOVEMBER 9, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. DON. M. CAMPBELL presented a patient the subject of inherited syphilis, showing an immense opening through the hard palate into the nasal cavities. Soft palate partially sloughed off and the turbinated bones necrosed through, as also a lachrymal abscess. Several large sequestra have been removed from the

nasal cavities and were exhibited in connection with the case. He also presented an eye enucleated from a patient the subject of acquired syphilis who had received an injury to the eye some six months ago. After enucleation a large tumor was found in the orbit. A piece of this tumor was removed for microscopical examination and as it proved to be benign it was not further molested. At the time of enucleating the left eye (which was entirely blind) the right presented an optic neuritis of moderate severity which subsided but unfortunately in spite of all treatment went on to atrophy.

DISCUSSION OF PAPERS.

DR. W. LYNN WILSON read a paper on "The Identity of Diphtheria and Membranous Croup." (See page 6.)

DR. C. G. JENNINGS: I agree in general with the statements presented by Dr. Wilson in his paper. It seems to me that there are not two separate and distinct diseases clinically, and I fail to see how they can be diagnosticated at the bedside. It is possible that one may have two separate and distinct diseases from a pathological stand-point—one producing a membrane impregnated with the diphtheria microbes, and the other producing a membrane swarming with other micro-organisms, but in my experience these diseases cannot be separated clinically and in practice.

DR. S. G. MINER: The most important point is the different kinds of membrane produced, and the difference in the character of the membrane denote a duality of diseases. I have seen two or three cases of membranous laryngitis which have ended fatally from stenosis alone, at no time presenting the profound systemic disturbance characteristic of diphtheria. Experiments have shown that there are two kinds of membranous laryngitis. A true and a pseudo-diphtheria, the former swarming with the germs characteristic of the diphtheritic infection and the latter with germs of another variety. The same may be said of membranous bronchitis. I therefore think that there is a duality of diseases here.

DR. BONNING: I often cannot diagnose membranous croup from diphtheria, and in practice I consider it much safer to look upon these all as of a contagious nature and treat them accordingly. As to treatment: for many years my results were very indifferent in these cases, but of late years I have had good results from the administration of tincture of iodine, one-fourth drop every hour, and one-fourth to one-eighth grain of calcium sulphide every three hours. From this line of treatment I have obtained good results in cases which at first seemed desperate.

DR. SHERMAN: It is clear that even if the specific germs of diphtheria are not found others are, and if germs are found the disease is contagious. The house should be placarded and the case isolated to prevent spread of the disease.

DR. METCALF: Other membranes than the true diphtheritic are sometimes responsible for the disease, and they simulate true diphtheria, but in these cases often the only sign is laryngeal stenosis, the systemic symptoms being very light and contagion not resulting. I have now under my care a case of membranous laryngitis presenting these symptoms and which I do not look upon as diphtheria. We were taught some years ago that if we tore off a membrane and left a bleeding surface on which a new membrane formed we had diphtheria,

and still many of these cases present no constitutional symptoms and are not followed by the usual sequelæ of diphtheria. I have two such cases under my care at this time and cannot bring myself to look upon them as true diphtheria.

DR. A. E. CARRIER: If you give a perfectly reliable preparation of calcium sulphide, one-fourth grain to one-eighth grain seems to be too large a dose not to be followed by unpleasant gastric symptoms. If a good fresh preparation of Merck's salt be given the desirable results may be obtained from one-hundredth grain.

DR. R. A. JAMIESON: I have employed benzoate of soda in these cases with success, giving ten grains every two hours, and with it use a benzoate of soda spray in the throat every half hour. This line of treatment is much more efficient than chlorate of potash and tincture of iron treatment, which latter is very liable to produce gastric disturbance, which, however, is not the case with the benzoate of soda treatment.

DR. H. J. HARTZ: Experiments on animals prove that a croupous membrane can be produced by trauma, chemical gases, and caustics. In diphtheria the bacteria produce a croupous membrane so that late authorities divide the disease into two varieties: (1) The mild croupous with but little systemic infection, and (2) the severe or septic form followed usually by fever and paralysis. Diphtheria could be successfully treated locally by remedies suggested two or three months ago by Dr. Jennings, but we should be called early enough and apply the remedies thoroughly ourselves.

DR. CARRIER: There seems to be but little difference to the outcome of the case—we look upon this affection as one or two diseases. All suspicious cases should be isolated and treated as diphtheria. The diagnosis by bacteriological method is not practicable to the busy practitioner.

DR. WILSON: An abrasion or a trauma may make a favorable nidus for the infection of the diphtheritic poison.

STATED MEETING, NOVEMBER 24, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

DR. J. P. O'DWYER read a paper entitled "Intubation of the Larynx." (See page 9.)

DR. C. G. JENNINGS: Dr. O'Dwyer, in his paper, has made the assertion that intubation has not been duly countenanced and properly tried by the surgeons of Detroit. To this assertion I must most emphatically take exception, because we *are* using intubation in Detroit and have been for some considerable time. In my own practice, I cannot get as good results in laryngeal diphtheria from intubation as I can from tracheotomy. This is due to one of two causes: either I do not grasp the essentials of the operation, or the type of cases I meet with are different from that met with by other men. There is one peculiar thing about the operations, and that is that some men seem to get fully better results from one form of operation than they do from the other. Some make brilliant records with tracheotomy and his neighbor makes equally brilliant results with intubation. My own best results come from tracheotomy. It seems to me that the Doctor's assertion that perfect tubes are very essential is not absolutely true,

because when intubation first came into vogue, the records show very brilliant results, but the tubes were necessarily very imperfect in their construction. These records have not improved in like proportion to the alleged improvement in the construction of the tubes, but still the fact remains, that the more perfectly the tube fits the larynx, the more comfortable the patient is and the less likelihood there is of ulceration. To illustrate my experience with intubation and tracheotomy, I will give the following cases somewhat in detail: (1) A case of mild, pharyngeal diphtheria, which gradually implicated the larynx. Intubation was performed and very great difficulty was encountered in feeding the child; this was finally overcome by forced feeding. The membrane re-formed below the tube and great difficulty was found in keeping the tube free; his breathing was continuously embarrassed and he finally died on the seventh or eighth day. (2) This case was similar to, but more severe than, the above. I performed tracheotomy. There was the same condition of the extension of the membrane down into the trachea, but we had no difficulty in keeping the passage free, the membrane being quite easily reached through the tracheotomy incision; this case made a good recovery. I firmly believe that had this case been intubated it would have ended fatally. Many cases end fatally after intubation. Any man who has a good knowledge of the anatomy of the parts, can easily introduce the tube after he has tried it a few times and operation on the cadaver is not a necessity.

DR. H. O. WALKER: Does the performance of intubation militate against a subsequent tracheotomy?

DR. C. G. JENNINGS: Secondary operations are not very successful. There should be a limit after intubation for the performance of secondary tracheotomy. After tracheotomy the throat can be thoroughly and antiseptically cleansed, and it is put in a position for the greatest amount of physiological rest, much more so than after intubation, for the tube always acts somewhat as a foreign body.

DR. H. O. WALKER: Could the larynx not be antiseptically dressed after tracheotomy?

DR. C. G. JENNINGS: It could.

DR. STANLEY G. MINER: As to simplicity of intubation, it is not so very simple as one at first glance might think. Some cases are very difficult of introduction, the false membrane getting in front of the tube and preventing its easy introduction. It is very necessary, for complete success, to observe carefully all the details of the introduction. The position should be perpendicular, inclining slightly forward, as this is the best position for an easy introduction of the tube. When once thoroughly mastered its apparent simplicity, and the fact that parents and friends will more readily consent to it, is the chief advantage over tracheotomy, which holds out more horrors to the eyes of the parents and friends but this very fact interferes very materially with the value and accuracy of statistics on these two procedures, because tracheotomy will frequently not be allowed until the patient is very far gone. Intubation has not yet reached the highest point of its utility. We should be careful in selecting our case for intubation because once the tube is in all other medication must practically stop. Thirty minutes at least must elapse before we are sure that the tube will remain in the larynx. I do not think intubation is indicated until the voice is materially interfered with; the patient shows signs of cyanosis

and then a retraction of the chest walls. Up to this point medication—general and local—should be vigorously employed. Respiration is, as a rule, much better after tracheotomy than after intubation and the patient can, with greater safety, be left with its nurse; the parts can be more thoroughly and easily treated and cleaned antiseptically. My tubes have always been of the ordinary make and I have had no trouble referable to imperfection in their design or construction.

DR. J. P. O'DWYER: I thank the gentlemen for the complimentary way in which they have discussed my paper. That there are disadvantages cannot be denied, but I think the disadvantages are outweighed by the advantages which it presents. The tube will sometimes be coughed up and will have to be replaced, and any accumulated discharge or membrane will have to be removed. Fifteen to forty grains of sublimed calomel every two hours will liquefy the discharge and render it much more easily removed. I have used the tube in whooping-cough.

DR. STONER: Have you used intubation with success in whooping-cough? Theoretically it would appear to be a bad thing.

DR. O'DWYER: Yes; I have used it with success in whooping-cough. Many cases go on to recovery after its use without cough and no bad results have followed its use.

DON. M. CAMPBELL, Secretary.

CORRESPONDENCE.

LONDON LETTER.

TO THE EDITOR OF The Physician and Surgeon:—The year 1891 can hardly be said to have been a sensational one, as far as medicine is concerned, in this country. We have had no sensational announcements such as the discovery of Koch's tuberculin, which set all the world talking last year.

KOCH'S TUBERCULIN.

Given to us near the close of 1890 with a flourish of trumpets and with puffing *ad nauseam*, that mysterious and deadly compound seems now to be almost forgotten, though perhaps the careful researches of Watson, Cheyne, Hunter, Crookshank and numerous other observers may yet discover in tuberculin some one or more substances of therapeutic value.

OBITUARY.

Disease has been rife as ever in our midst, and the medical death roll is a heavy one. Not many noted names perhaps, if we except Professor John Marshall, Sir Prescott Hewett, Wharton Jones and Sir Risdon Bennett, but many a young and earnest worker as yet only a few steps upon the ladder of fame has been taken away from us. Not a few of these were victims to that pestilent scourge, influenza, which visited us again last May and is still hovering in our midst threatening once more to become general in this country.

TYPHOID.

Typhoid, too, seems to have been more than usually prevalent, especially in the later months of the year, and the fact that one of our most popular Princes has been down with it has undoubtedly directed the attention of the public to

this insidious disease. Rightly or wrongly a contaminated water supply has generally been credited with the origin of most of our recent outbreaks, and this has led in many of our towns to a healthy spirit of inquiry as to the fitness of private water companies to enjoy the monopoly they at present so frequently possess.

MEDICAL REFORM.

All real friends of medical reform will welcome the important step which has been taken by the General Medical Council in this country in making a five years' curriculum compulsory. It is a useful stipulation that the last year shall be entirely devoted to clinical work.

DEATHS FROM CHLOROFORM.

A more than usually high mortality from the administration of chloroform as an anæsthetic, has caused many of our hospital authorities to "consider their ways" in the matter of anæsthetics. Edinbro', it is true, still sticks to her first love, but elsewhere a growing disposition to substitute ether for chloroform is apparent, and this notwithstanding the favorable nature (to advocates of chloroform) of the report of the Hyderabad Commission.

BRITISH MEDICAL ASSOCIATION.

The British Medical Association continue to do good work and to increase the number of its members. The annual meeting held at Bournemouth was a distinct success and will perhaps be especially remembered for the sumptuous character of the social entertainments provided by the local members of the profession. The program of the Nottingham meeting to be held next July is already issued and gives promise of many good things.

INTERNATIONAL CONGRESS OF HYGIENE.

The annual meeting of the British Medical Association, was followed in August by an even more important assemblage of scientists at the International Congress of Hygiene and Demography, which was held in London. Here also much good work was done, and there was also much feasting.

Looking back upon the year 1891, we may say that it has been a fairly prosperous one. Some good and much needed reforms have been brought about in medical affairs, but, as will always be the case, there is still much to be done. That the year 1892 may be a prosperous one to the profession in America is the sincere wish of YOUR LONDON CORRESPONDENT.

LONDON, December 31, 1891.

EDITORIAL ARTICLES.

THE ORIGIN OF SEX.

THERE is something perplexing to the outsider in the way in which certain problems in biology defy attempted explanation at the hands of science. The function of the liver cells can be studied and described with a degree of exactness that amounts to absolutism, while processes which would appear equally within range of scientific observation have a tantalizing way of eluding

detection, though they be submitted to the most vigilant scrutiny. The origin of sex, for instance, would not appear any more mysterious, or any less accessible to scientific discernment, than the function of the cells of the anterior cornu; yet one is revealed while the other remains hidden, and this, notwithstanding the fact that the former is a problem of surpassing interest, the solution of which has an intensely practical bearing for the whole of mankind.

A theory of sex recently promulgated by that accomplished biologist, Dr. Andrew Wilson, of Edinburgh, is deserving some attention, in that it tends to confirm a view that has been acquiring prominence in the minds of contemporary investigators. Dr. Wilson believes the influence determining sex-differentiation to be primarily that of nutrition. Mr. Herbert Spencer long ago pointed out how nutrition affected biological processes, and was ultimately responsible for variations in genesis development and multiplication; and in their recent work on the "Evolution of Sex," Messrs. Geddes and Thompson have held that a *catabolic* habit of body (or conditions in which a tendency exists to the predominance of waste over repair) favors the production of males, whilst an opposite habit of *anabolism* (a tendency to constructive over destructive processes) tends to the production of females. This view is supported by experimental evidence, and here nutrition is obviously the key-note to the different phases of sexual development.

Assuming as well-proved the doctrine that the embryological history of an organism indicates its ontogeny, it is found that until the sixth week of uterine life, the organism is essentially neuter in gender, which would suggest that sex has been specialized from some common hermaphroditic type. The sex of each fœtus practically hangs in equilibrium for a definite period, and then as a result of some bias it has received, it inclines toward one or other sex. What gives this bias?

Is the bias a nutritive one? Dr. Wilson contends that it is. Fertilization alone determines the beginning of embryological development, and concisely stated, Dr. Wilson holds "that when an ovum is impregnated before the occurrence of the menstrual period it will develop a male embryo, while conversely if the ovum be impregnated after the menstrual period it will result in female conception." When the ovum is newly extruded from the ovary it is in its most robust and perfect condition, and fertilization at this date gives it a bias in favor of the stronger racial progenitor, imparting to it an anabolic tendency, while contrary-wise should fertilization be post-menstrual, occurring after the ovum has lain sometime in the Fallopian tube, the tendency given is catabolic and the conception will be a female.

While this explanation is on lines convergent with those suggested by Messrs. Geddes and Thompson, a different result is reached owing to reverse conditions prevailing in the human kingdom to those in the animal kingdom in general. In the animal kingdom as a rule, the female is the strongest in a structural and functional sense, and is therefore endowed with a predominant nutritional factor. The fertilization of the ovum when newly emerged from the ovisac, therefore yeilds a female conception.

The objections which could be urged to this theory are of course very numerous, one of the chief being that the prognostications made under its teaching assume for their verification the coincidence of menstruation and

ovulation. If ovulation be, as many now believe it, a continuous process, independant of menstruation, the spermatic fluid is not any the more or less likely to encounter ova with specific sexual tendencies, at the pre- or post-menstrual epochs.

A characteristic feature of this theory is the low value it accords to the sperm element in determining the actual origin of sex; the whole question simply hinges upon *the time* of fertilization of the ovum; not on the relative vitality of spermatozoon or ovule.

EDITORIAL BREVITIES.

PROFESSOR KOCH.

PROFESSOR KOCH appears to be reaping the world-wind. Much indignation is expressed at his last communication. Professor Hueppe asserts that it contains nothing that has not been independently demonstrated at the hands of other investigators; that it deprecates the work of others, and is utterly wanting in anything like a generous appreciation of his co-workers. The British medical press is also somewhat chafed at Koch's disregard of the work done by Cheyne and Hunter. America is not even remembered in a passing reference. That Koch's triumph should excite a certain amount of envy is natural, but it is gratifying to find that "tuberculin" may not be an absolutely futile discovery as far as the therapeutics of phthisis go. The recent experiments of Professor Klebs, with a substance which he calls tuberculocidin, which he has isolated from crude tuberculin, lead him to claim for it the highest value as a specific agent in checking the ravages of the bacilli.

THE KREUTZER SONATA.

COUNT LEON TOLSTOI is now actively engaged in relieving the famine-stricken peasants of Russia, but here is an accident he cannot altogether atone for by public benevolence: A young lady of good family, of Saint Petersburgh, was driven to insanity by reading the "Kreutzer Sonata." Having read the book, she threw her windows open, and crying, "Dissipation, dishonor everywhere!" she attempted to jump out. Her maid prevented her. She then shut herself up and refused to take food for three days. At length she was persuaded to take food by a trick. A physician resembling Count Tolstoi in appearance was introduced to her as the Count, and, humoring her whims and speaking to her in the manner Tolstoi himself would speak, he advised her to eat what was absolutely necessary to maintain life. The illusion is still kept up by means of letters addressed to her in the name of Tolstoi. But the doctors are afraid that she may get worse if she discovers the deceit, and they advise her parents to submit her to the treatment of hypnotism.

THE RECRUDESCENCE OF INFLUENZA.

THE recrudescence of this troublesome malady in a more or less aggravated form directs attention to the best means of treating it. An article by Dr. Leeson, in the *British Medical Journal*, urges isolation as the only effective way of preventing its spread. The practice of giving antipyretics, or analgesics of coal-tar derivation is condemned, for their depressing effect upon vitality, rendering

subsequent debility very marked. Stimulation of the emunctories, and hypernutrition, seem to be the lines on which therapeutics should be directed. The quick relief, of some of the troublesome symptoms, by the use of phenacetine, antipyrine, and other analgesics, should not lead physicians to prescribe remedies undoubtedly depresssing in the long run.

THE PAN-AMERICAN MEDICAL CONGRESS.

THE project of convening a medical congress, to be composed of representatives from all the Americas, is likely to eventuate in something practical. The preliminaries of the gathering have already been arranged, and the meeting will most probably take place in Washington in October, 1893. The deliberations of the congress will be of a polyglot description, English, Spanish, and French being the official languages of the congress.

THE FIRE AT THE EASTERN MICHIGAN ASYLUM.

THERE is no more appalling calamity than a fire in a mad-house. Sensational writers gloat over the opportunity such an event affords for the relation of heart-rending and blood-curdling incidents. Had it not been for good sense and superior management, the recent fire at the Pontiac asylum might easily have fulfilled the expectations of some of the newspaper reporters, whose thrilling, but unveracious, accounts of the catastrophe seem to have been written at some distance from the scene of actual occurrence. The State is to be congratulated that the medical staff of the asylum proved themselves so fully equal to the emergency that not a single life was lost. The anxiety suffered by all responsible officials has undoubtedly been intense, and it is as highly gratifying to observe such remarkable self-control as it is to notice the triumph of good order and discipline as the outcome of scientific management.

MEDICAL NEWS.

CORONILLA VARIA is a new heart tonic.

THERE are one hundred and fifty-three medical journals in Paris.

DR. F. E. PILCHER, of Detroit, has returned from his marriage trip.

CONSTANTINOPLE is to have a medical faculty—the first in Turkey.

DR. IRA W. FISKE, an old physician of Kalamazoo, died of apoplexy.

FOURTEEN towns in England have elected medical men as mayors.

DR. A. H. STEINBRECHER, of Detroit, has returned from his marriage trip.

TWO PHYSICIANS in a village in Illinois were recently caught trying to blow open a bank safe.

SWEETNESS AND LIGHT.—Fifty million dollars worth of candy is consumed annually in America.

PHILADELPHIA, the city of medical journals, if we except Saint Louis, is enjoying a daily medical journal.

DR. C. W. HITCHCOCK, the excellent Secretary of the Michigan State Medical Society, was married December 24.

ANTONIO SCARPA, the celebrated anatomist, is to have a memorial. The statue, it is suggested, should be erected in a triangular space.

THE sixth execution by electricity took place recently in Sing Sing, New York. Four contacts were required to produce death.

THE DETROIT MARINE HOSPITAL has received a twenty-thousand-dollar appropriation from Congress for increased accommodations.

THE OPIUM HABIT IN THE COURTS.—A Dakota court is to decide whether a physician can be sued for causing the opium habit in a patient.

DR. KEELEY has several lawsuits in progress. One, by a former patient, asks for twelve thousand for damages to health by the golden treatment.

A LIBELOUS MONUMENT.—A Saint Petersburgh physician is prosecuting a man who caused the physician's last prescripton to be placed over his wife's grave.

A VENEREAL CONGRESS.—It is proposed to convene a congress in Paris for the purpose of considering questions connected with the limitation of venereal diseases.

TERCLORIDE OF GOLD, is said, by the *Medical Record*, to have been used twenty years ago by Dr. Hoffman, of New York, as a remedy for alcoholism, and failed.

THE CONSOLATIONS OF MEDICINE.—An enterprising physician in California advertises: "I will pay half of the funeral expenses in cases where I am not successful."

A SUBSTANTIAL BEQUEST.—Montreal General Hospital receives a bequest of one hundred thousand dollars by the will of the late George Chetwode Hamilton of that city.

SNEEZING is thought to favor the expulsive efforts of nature in tardy labor. The remedies that irritate the Schneiderian membrane may therefore be regarded as oxytocics.

THE ASSOCIATION OF MILITARY SURGEONS OF THE NATIONAL GUARD OF THE UNITED STATES.—The second annual meeting will be held at Saint. Louis, April 19, 20, and 21.

LET CHICAGO LOOK OUT.—Expositions attract syphilis to cities. At the close of the World's Fair in Paris there were said to be fifty thousand syphilitic women within the city limits.

THE LATEST SUBSTITUTE FOR THE COMPOUND PILL is a gelatine capsule with various compartments, each one containing one of the ingredients in powder or extract, uncombined.

CITY PHYSICIAN OF GRAND RAPIDS.—The City Council will investigate the accounts of the late occupant of this office. In the meanwhile Dr. C. M. Kelly has been appointed to the position.

DIPLOMA MILL.—A Cincinnati renegade has been issuing diplomas from "The Medical University of Ohio." The faculty of this "University," was comprised in the person of one Van Vleck.

THE CANCER TREATMENT, inaugurated by Professor Adamkiewicz, is pronounced a failure. He was recently afforded an opportunity for practicing it in Billroth's wards in the Vienna Hospital.

THE SNAKES OF INDIA.—In 1890 nearly twenty-two thousand people were bitten by snakes. The people killed nearly five hundred and eleven thousand snakes. This is better than delerium tremens.

DR. GRAVES, who was convicted at Denver, Colorado, for the murder of Mrs. Barnaby, has applied to the Governor of Colorado for a reprieve of sixty days, in which to prepare an appeal to the Supreme Court.

WOMAN'S HOSPITAL AND FOUNDLINGS HOME.—The attending physicians for the ensuing year are Drs. H. W. Longyear, Walter P. Manton, J. H. Carstens and R. W. Gillman; alternates, Drs. Lucy J. Utter and W. J. Cree.

THE last number of the *Annals of Surgery* contains some interesting articles, notably one on the treatment of traumatic aneurisms by Matlakowski. Dr. Roswell Park's Mutter lectures continue to be as interesting as ever.

MARINE HOSPITAL SERVICE.—Dr. Walter Wyman's annual report shows that fifty-two thousand nine hundred and ninety-two sailors were treated in the various hospitals and dispensaries of the service during the fiscal year of 1891.

RATS, KANGAROOS OR OPOSSUMS.—Dr. Marcey, of Boston, advocates kangaroo-tail sutures. Dr. Belt, of Washington, thinks rats tails furnish an excellent suture. Dr. Chisholm, of Baltimore, is reported to have a predilection for the opossum.

DR. SAMUEL ADAMS JACKSON, of Muskegon, medical officer of Muskegon county, died on January 12, of blood poisoning contracted while amputating a gangrenous arm. The Doctor was a graduate of the University of Michigan, medical class of 1886.

DR. FLAVIUS M. WILDER, a well-known physician of Chicago, was shot and killed by John Redmond, who was recently discharged from an insane asylum. Dr. Wilder was a graduate of the medical department of the University of Michigan, class of 1868.

WE call the attention of our readers to Messrs. John Wyeth & Brother's new advertisement which appears in this number, relating to their compressed tablets of new remedies (antipyretics) for influenza, neuralgia, headache, etc., and their great convenience for administration.

MALPRACTICE SUIT.—The case in which Lillie E. Spaulding brought suit against Drs. L. W. Bliss and E. W. Davis, of Saginaw, for ten thousand dollars damages for alleged malpractice, while attending her for a broken leg, was dismissed with a verdict of no cause for action.

DR. H. A. GERRY, of Detroit, is, we believe, the first physician of her sex, to perform a laparotomy in Michigan. The Doctor recently undertook the surgical treatment of a very interesting case, and succeeded in demonstrating a ruptured ectopic pregnancy. The patient is now, we are glad to learn, a living justification of the art and science of surgery, as practiced by the lady-members of the profession.

DURING the past year there were five hundred and twenty-eight patients treated at the Garfield Hospital in Washington. Forty-four deaths occurred out of this number. The hospital is reported to be in excellent condition, and has an additional building in process of construction.

DR. WILLIAM T. JENKINS has been named as health officer for the port of New York. For the past nine years he has been a coroner's physician in that city. He is about forty years of age, a graduate of the University of Virginia, and will receive a salary of ten thousand dollars a year.

UNUSUAL SOURCE OF INFECTION.—A case is reported of a servant maid who contracted a primary lesion in consequence of applying vaseline to her chapped lips, which vaseline was taken from a pot or bottle belonging to a male boarder. The latter was a subject of a chancre of the penis and had been using the vaseline to annoint the part.

A MARYLAND DOCTOR was recently called upon to stitch a gaping wound in an injured man. Having completed his task, he requested the payment of his fee of two dollars. This was refused, so the doctor cut the stitches. There seems to have been some doubt as to the inability of the patient to pay. The physician has, however, met with general and deserved censure.

ALVARENGA PRIZE.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1892. Essays intended for competition may be upon any subject in Medicine, and must be received by the Secretary of the College on or before May 1, 1892. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College.

HARPER HOSPITAL.—The following were elected to hold office during the ensuing year: S. M. Cutcheon, president; W. K. Muir, vice-president; Bryant Walker, secretary; Gen. Wm. F. Raynolds, treasurer; R. W. King, librarian; M. C. Strong, superintendent; Dr. E. L. Shurly, chief of medical staff; Mrs. Lystra E. Gretter, principal of Farrand training school. The board of trustees for the ensuing year is: W. R. Farrand, George H. Russell, Russell A. Alger, W. H. Elliott, H. B. Ledyard, George F. Moore, Clarence A. Black, Gilbert Hart, S. M. Cutcheon, R. W. King, A. C. McGraw, J. L. Hudson, William A. Moore, Frank J. Hecker, W. K. Muir.

A MOTLY LOT OF IMMIGRANTS.—The report made to the State Board of Health on inspection of immigrants at Port Huron, for excluding dangerous diseases for a period covering the first five days of December, shows the chances of such diseases being introduced by reason of the immigrants passing through Michigan to states beyond, being from so many different countries. The numbers and nationalities were as follows: Nine Arabs (from Jerusalem), seven Austrians, one Belgian, thirty-six Danes and Sweedes, two Egyptians, four French, fifteen French Canadians, forty-four Germans, four German Jews, four Greeks, twenty-three Italians, twelve Irish, five Poles, two Portuguese, six Russians, seven Russian Jews, thirty-two Scotch and English, seventeen Scandinavians and four Swiss. Their destinations were mainly to Chicago and the

Northwest, but one was bound for the city of Mexico, so that that distant country might even be interested in measures taken at Port Huron to isolate dangerous diseases. On four out of the five days there was disinfection of baggage.

A SHREWD DOCTOR.—A celebrated German physician was once called upon to treat an aristocratic lady, the sole cause of whose complaint was high living and lack of exercise. But it would never do to tell her so, so his medical advice ran thus: "Arise at 5 o'clock, take a walk in the park for one hour, then drink a cup of tea, then walk another hour and take a cup of chocolate. Take breakfast at 8." Her condition improved visibly, until one morning the carriage of the baroness was seen to approach the physician's residence at lightning speed. The patient dashed up to the doctor's office, and on his appearing on the scene she gasped out, "Oh, doctor, I took the chocolate first?" "Then drive home as fast as you can," ejaculated the astute disciple of Aesculap, rapidly writing a prescription, "and take this emetic. The tea must be underneath." The grateful patient complied. She is still improving.

THE DYING PROPHET.—An extraordinary person, who goes by this name, is creating intense religious excitement in Russia, says the *Medical Record*. He dies every Saturday night and comes to life Monday morning. In the interim he has intercourse with the recording angel, and learns the secrets of human lives. The accounts state that he was born in the Caucasus, where he now lives. He is yet a young man, of humble rank in life, and of only ordinary education, Since childhood he has been bedridden and utterly helpless. For years he lay in his humble cottage, in the outskirts of Tiflis, with nothing to distinguish him from any common invalid. But a few months ago a curious change was observed. In brief, he died, to all appearances. His friends believed him dead. According to all ordinary tests, he was certainly dead. That was on Saturday. The doctors declared him dead. They prepared his body for burial, and the corpse lay in the coffin Monday, when the funeral was to take place. At the very hour set for the obsequies, however, the young man suddenly returned to life. Ever since the same event has occurred every week.

AMERICAN MEDICAL ASSOCIATION.—Arrangements for the meeting in Detroit next June are now in progress, and the gathering promises to be among the best ever held in the history of the Association. The chairman of the committee of arrangements has appointed the following local committees. EXECUTIVE: H. O. Walker (Chairman), F. W. Mann (Secretary), T. A. McGraw, Donald Maclean, E. L. Shurly, J. H. Carstens, C. G. Jennings, H. W. Longyear, Leartus Connor, David Inglis, H. F. Lyster. ASSOCIATES: *Registration*—David Inglis (Chairman), C. W. Hitchcock, Angus McLean, S. G. Miner, W. F. Metcalf. *Finance*—E. L. Shurly (Chairman), J. B. Book, S. P. Duffield, E. A. Chapoton, J. E. Clark, W. P. Manton, Charles Douglas. *Entertainment*—Donald Maclean (Chairman), H. A. Cleland, George E. Frothingham, C. J. Lundy, Theodore A. McGraw. *Transportation, Hotels, Etc.*—H. F. Lyster (Chairman), W. G. Henry, A. E. Carrier, O. S. Armstrong, W. F. Metcalf. *Railroad Depot*—Benjamin P. Brodie (Chairman), Dayton L. Parker, F. W. Robbins. *Reception*—Leartus Connor, Detroit (Chairman); G. E. Frothingham, Detroit; C. G. Jennings, Detroit; E. W. Jenks, Detroit; Hal C. Wyman, Detroit; Carl Brumme, Detroit; G. W. Stoner, Detroit; A. W. Alvord, Battle Creek; J. Avery, Greenville; H. B. Baker,

Lansing; E. O. Bennett, Wayne; Lyman Bliss, Saginaw; Eugene Boise, Grand Rapids; Flemming Carrow, Ann Arbor; E. P. Christian, Wyandotte; W. H. DeCamp, Grand Rapids; G. Dock, Ann Arbor; S. S. French, Battle Creek; J. B. Griswold, Grand Rapids; F. J. Groner, Grand Rapids; W. J. Herdman, Ann Arbor; G. K. Johnson, Grand Rapids; T. J. Langlois, Wyandotte; R. LeBaron, Pontiac; C. H. Lewis, Jackson; Kate Lindsay, Battle Creek; H. McColl, Lapeer; W. J. McHench, Brighton; H. R. Mills, Port Huron; J. D. Munson, Traverse City; R. N. Murray, Flint; A. W. Nichols, Greenville; J. D. North, Jackson; P. D. Patterson, Charlotte; E. H. Pomeroy, Calumet; G. E. Ranney, Lansing; C. Sheppard, Grand Rapids; J. M. Snook, Kalamazoo; C. B. Stockwell, Port Huron; H. D. Thomason, Albion; A. A. Thompson, Flint; V. C. Vaughan, Ann Arbor; G. V. Voorhees, Coldwater; D. W. C. Wade, Holly; D. E. Welsh, Grand Rapids; H. Williams, Saginaw; D. H. Wood, Quincy. *Place of Meeting of Sections*—J. H. Carstens (Chairman), J. J. Mulheron, J. E. Emerson. *Information*—H. W. Longyear (Chairman), W. B. Sprague, Charles P. Frank, *Exhibits*—H. O. Walker (Chairman), F. W. Mann, C. G. Jennings, *Printing*—G. Duffield (Chairman), C. H. Leonard, W. R. Chittick, L. E. Maire.

RECENT PUBLICATIONS.

REVIEWS.

A MANUAL OF PRACTICAL OBSTETRICS.*

THE taste of the medical student in these days, when medical studies are so numerous, naturally expresses itself in favor of small manuals. There can be no doubt that Dr. Davis' manual of obstetrics will find a large patronage, for the reason that it so aptly meets these requirements. The author has furnished a concise statement of the obstetrical practices prevailing with leading exponents of the art of obstetrics. The work is profusely illustrated with plain and colored plates, and will be found an excellent investment for the small cost of purchase.

* By Edward P. Davis, A. M., M. D., clinical lecturer on obstetrics in the Jefferson Medical College, professor of obstetrics and diseases of children in the Philadelphia Polyclinic, etc., with one hundred and forty illustrations, several of which are colored; three hundred pages. Price, $2.00. P. Blakiston, Son & Company, Philadelphia.

PTOMAINES, LEUCOMAINES AND BACTERIAL PROTEIDS.*

SINCE the date of the first edition of Drs. Vaughan and Novy's work on ptomaines and leucomaines, the subject of which they treated has risen to first importance in the science of medicine. It was not a matter of surprise, therefore, when a second edition of this excellent manual appeared. The progress made during the last three years, in our knowledge of the bacterial products, and the parts they play in the causation of diseases, has necessitated the revision and enlargement of the book. To the outsider no subject would have appeared less promising as a field of investigation than the chemistry

of putrification, yet no branch of inquiry has yielded more beneficial results, than has this one, covering as it does, the whole field of antiseptic surgery and preventive medicine.

The manual before us is a comprehensive yet concise description of all that is at present known regarding the chemical composition and physiological effect of the various ptomaines and leucomaines yet discovered. Interspersed throughout the book is a large amount of matter dealing with the relation of bacterial products to infectious diseases, with which it is highly essential the physician should be famliar, that he may adjust his conception of disease-processes in accordance with modern requirements.

The book is a highly creditable production, and will doubtless meet with the reception it so well deserves.

* By Victor C. Vaughan, Ph. D., M. D., professor of hygiene and physiological chemistry, University of Michigan, and Frederick G. Novy, Sc. D., M. D., asstistant professor of hygiene, etc., in the University of Michigan. Second edition. Cloth; three hundred and ninety-one pages. Lea Brothers & Company, Philadelphia.

AGE OF THE DOMESTIC ANIMALS.*

THIS is a book which will be useful to every veterinarian and acceptable to all lovers of animals. How to determine the age of domestic animals is a question which frequently confronts every individual at one time or other, and especially is it desirable for the doctor to know how to tell the age of the horses he is buying. Interspersed throughout the pages of this volume will be found a large amount of information which will be interesting to the general reader, and indispensable to the student of veterinary medicine.

* By Rush Shippen Huidekoper, M. D., veterinarian (Alfort, France), professor of sanitary medicine and veterinary jurisprudence in the American Veterinary College, New York, etc. Ilustrated with two hundred engravings Price, $1.75 net. F. A. Davis, Philadelphia.

THE PHYSICIAN AS A BUSINESS MAN.*

THE physician is more often reputed to be a poorer business man than he is actually likely to be. Many physicians are poor business men in the sense that they have not enough business, and no other. The little book before us contains some valuable hints for physicians generally. The large number of fee tables, if properly digested and acted upon, will in most cases add to an increased income, and the miscellaneous hints on all subjects if followed can only result in increased financial stability, and higher professional standing in the community.

* By J. J. Taylor, M. D. Cloth; one hundred and forty-three pages. Price, $1.00. The Medical World, Philadelphia.

A MANUAL OF VENEREAL DISEASES.*

IN very condensed form the authors of the present work have described the course and symptoms of the three venereal diseases—syphilis, chancroid, and gonorrhœa. The spirit of the work is practical. Students will find the volume an excellent one for acquiring a knowledge of the essential points of these

diseases. The binding is neat and serviceable, and the publication presents the excellent appearance that characterizes all that emanates from the house of Messrs. Lea.

* By Everett M. Culver, A. M., M. D., pathologist and assistant surgeon Manhattan Hospital, New York, etc., and James R. Hayden, M. D., chief of clinic venereal department Vanderbilt clinic. Illustrated. Cloth; two hundred and eighty-seven pages. Price, $2.00. Lea Brothers & Company, Philadelphia.

THE A B C FOR THE SWEDISH SYSTEM OF GYMNASTICS.*

THIS production is a very clear and easily understood description of the Swedish educational gymnastics. It is so arranged that any teacher of ordinary intelligence can, with very little effort, take charge of a class and submit the pupils to a regular course of instruction.

* H. Nissen, instructor in physical training in the public schools of Boston, Massachusetts, etc. Seventy-seven illustrations. Cloth. Price, 75 cents net. F. A. Davis, Philadelphia.

REFERENCES.

BOOKS AND PAMPHLETS.

"Leprosy and Vaccination." By Wm. Tebb. London: E. W. Allen.

"Electricity in Carcinoma." By Robert Newman, M. D. Reprinted from *Times and Register.*

"Trap-syphonage and Trap-seal Protection." By Professor J. E. Denton, Hoboken, New York.

"A Vegetable Plate; also a New Technique in Intestinal Anastomosis." By R. H. M. Dawbarn, M. D., New York.

"Proceedings and Addresses at a Sanitary Convention held at Negaunee, Michigan, under the auspices of the State Board of Health."

"Proceedings and Addresses at a Sanitary Convention held at Centerville, Michigan, under the auspices of the State Board of Health."

"On Dermatol, a Proposed Substitute for Iodoform—Its Use in Surgical Practice." By C. A. Powers, M. D. Reprinted from *Medical Record.*

"Abdominal and Pelvic Surgery." By Wm. H. Watkin, M, D., Louisville. Reprinted from "Transactions of the American Association of Obstetricians and Gynecologists."

"The Surgical Treatment of Pyloric Stenosis, with a Report of Fifteen Operations for this Condition." By Nicholas Senn, M. D., Ph. D. Reprinted from *Medical Record.*

"A Plea for Extra-Peritoneal Treatment of the Stump in Abdominal Hysterectomy for Fibroids." By A. L. Lapthorn Smith, B. A., M. D., Montreal. Reprinted from *Canada Lancet.*

MEDICAL PROGRESS.

MEDICINE.

RACE AND DISEASE.

CERTAIN races of mankind possess greater vitality and tenacity of life than others. Pre-emienent among the vital races stands the complex Anglo-Saxon, who seeks the north pole without fear, penetrates the heart of Africa, plants business enterprises upon the equator, and carries commerce into every degree of latitude, regardless of climate. Scandinavian, Frank, and Teuton also possess a similar spiritual endurance that conquers circumstance and overcomes the force of nature. The Slav, the Latin, and the despised Turk share it in part.

Causes of disease that slay thousands of those subject to them, but who through habit lack vigor of constitution, which is always the best safeguard, pass lightly over hardier or temperate-zone races. Thus is explained the comparative immunity, during the great plague in Alexandria in 1835, of French, English, Russian, and German residents. Though exposed in the most open manner, it is said that they suffered only in proportion of five per cent. while Arabs succumbed at the rate of fifty-five per cent., Malays, sixty-one, Negroes and Nubians, eighty-four per cent. Among certain American Indians there is one death in every twenty-six and twenty-three hundredths inhabitants, and this is not due to the cruelty of the unfeeling white man.

Among less hardy peoples, the inhabitants of the earth in whom inherent vitality is of a low order, the readiness to lie down and die upon slight provocation seems a cowardly kind of business to others trained in the habits of real grit. The plucky races of mankind are determined to pull through, to fight disease as though it were an attacking enemy, to recover to please friends, spite rivals, foil foes, or complete some task as yet unfinished. Some impulses from the organs of thought and will materially affect the rest of the nervous system, the heart, and secretions. The weaker races die as easily as falling asleep, die from "pure cussedness," as the sailors say. The late surgeon of R. Y. S. Sunbeam, Bernard Hoffmeister, records interesting experiences among the natives of East Africa. Their apathetic dependence on fate, and its consequent mental and physical inertia, are best overcome by alcohol. They are so accustomed to its action that a very small dose produces excellent effects, puts a little energy, even a little "devilment" into the poor creatures, who, during convalescence realize that destiny insists upon their surviving. Chinese and Japanese are much better patients, for they have faith, moral courage, they want to recover, and the natural constitution is more robust.

Racial idiosyncrasies are also of interest. Africans are much less subject to dengue than others and have it lightly, yet small-pox plays sad havoc with the negro and with the Arab of the Nile region. The Aryan races of Central Asia also suffer terribly from this disease, to the extent of complete depopulation in particular valleys and islands. Measles is the cause of great devastation among insular races, especially in warm countries. It assumes, among a people

incapable of resisting a panic-creating disease, a more virulent type than is known in Europe. Ethiopians stand malaria pretty well, without after-effects, as a rule. Pure-blooded negroes do not have yellow fever, nor do Hindoo coolies, and the Chinese are almost exempt. African races incur greatest danger from cholera, dying off with the greatest rapidity and no effort at resistance. There is scarcely time for any treatment. Europeans in oriental countries and the Hindoos suffer similarly. Bronchial catarrh, pneumonia, and consumption are particularly fatal among native dark races in Africa and Asia. Typhoid fever off the coast of Malabar is extremely dangerous to Europeans, though the natives escape with only mild attacks. Visitors to Saint Kilda or the Society Islands will start from some slight cold, an epidemic of influenza among the natives. Even a cold introduced by a passing vessel runs through Ascension Island as a severe epidemic, necessitating rest in bed and active treatment for days. Recent arrivals are lightly attacked, older sojourners more severely, and the natives often dangerously. In the Island of Tristan d'Acunha the effect is more virulent, leading even to fatal results. Isolation from other race—due to situation, feuds, scant means of locomotion, and to religion—has accentuated through heredity, liability to certain forms of disease and induced distinct racial idiosyncrasy.

The perpetual superiority of native inhabitants of the temperate zone is owing to the formative conditions there, which develop the strongest constitutions. This temperate-zone superiority becomes at last a racial peculiarity that time cannot change. Brain and brawn of such calibre have really nothing to fear. And it is not too visionary to expect for them, on purely anatomical grounds, the conquest and control of the whole world.—*Medical Record.*

THE KINDRED OF CHOREA.

Dr. Octarius Sturges, in an article on this subject in the *American Journal of the Medical Sciences*, concludes as follows:

(1) Recent endocarditis, with no further heart change, is the cardinal anatomical feature in those dying with chorea without reference to rheumatism. Yet it is not constantly found, and some of the most striking examples of deaths by chorea are without it.

(2) Choreic endocarditis is distinguishable from rheumatic endocarditis both clinically and anatomically. Clinically it is without physical or general signs, often without rheumatism, and only disclosed post-mortem. Anatomically the inflammation is recent, its chief, often its only seat, is the mitral valve, and there are no consecutive changes in the heart. The contrast to this condition is seen in rheumatic children with valve disease who are or who have been choreic. In them the physical signs observed during life correspond with well-recognized changes in the valves and heart chambers found after death and due to the rheumatism and not to the chorea.

(3) Choreic endocarditis, therefore, is not accurately described as a manifestation of rheumatism. Both chorea and rheumatism are liable to this inflammation, each after its own manner. The common feature may be taken as evidence that the two affections are pathologically allied, not that either of them is a form or expression of the other.

(4) The fact of this alliance is best seen by the observation of chorea in very early life, at which period it is often intimately associated with rheumatic polyarthritis in the same subject and at the same time. But with growth, in obedience to the natural history of the two affections respectively, and influenced by the several actions of life, this association is relaxed, and at puberty it has ceased to be intimate.

(5) Both chorea and rheumatism are, it is probable, members of a pathological group which has arthritis for a common factor, and of whose underlying source we are yet in search.

THE HEALTH OF THE AMERICAN GIRL.

In a recent newspaper article, Dr. Louise Fiske Bryson stated that the reign of ignorance and superstition was deplored by those who ought to know better. Because the American girl learned the modern alphabet, her doom was supposed to be sealed. It was feared that man in America would shortly be without a fitting mate and life cease to be delicious. The question of any physical deterioration in the American girl was quickly settled by an appeal to trade, to dollars and cents. The venders of ready-made garments stated that small women, who had formerly found a perfect fit in styles manufactured for girls of sixteen, were now wearing fourteen-year-old sizes. Naturally these women had not decreased in height and weight, but the American girl was larger. Sense and hygiene in the home during the past twenty-five years had had marked results. The maiden of to-day was the outcome of this improved and nobler way of living. Tears might be shed for medical sins, negligences, and offenses, but not for the American girl, who was likely to hold her own for some time to come.

THE DOCTOR'S EARNINGS.

According to Dr. Jarvis' tables, the average of the lives of physicians is fifty-six years. If you begin practice at twenty-four, your active life prospect will be thirty-two years, and from a thousand to fifteen hundred dollars will represent your average yearly income. Now, were you (through God's mercy) to practice these thirty-two years without losing a single day, and collect (say) eight dollars every day of the time, you would receive but $93,440. Deduct from that amount your expenses for yourself and your family, your horses, carriages, books, periodicals, and instruments; your taxes, insurance, and a multitude of other items for the whole thirty-two years (eleven thousand six hundred and eighty days), and then, so far from being rich—you would have but little, very little, left to support you after you naturally reach the downhill of life, or are broken down in health, and faculties deteriorated, and in need of a physician yourself, through worry, anxiety, and fatigue, in the discharge of your duty.—*Kansas Medical Journal.*

THE CHINESE TREATMENT OF HYDROPHOBIA.

A Chinese journal, referring to the dangers of hydrophobia, points out that the European doctors have not yet discovered an effective treatment for this disease. In order to determine whether the disease is really hydrophobia, the following method is recommended by a Chinese contemporary for this purpose:

Get a gong or any large brass utensil and strike it before the patient. If he is suffering from hydrophobia he will at once show signs of madness, then fan him with a large palm-leaf fan, and he will crouch down as if in great fear. When the presence of the disease is thus ascertained, the next step that should be taken— a most important one— is to search the hair of the patient. There will certainly be found one hair of the color of vermilion, and rather stronger and coarser than ordinary hair. This particular hair should be entirely pulled out; not even the smallest part of the root must be left, otherwise the disease cannot be cured. When this has been done, a prescription must be prepared, and the drugs used should be of such a nature as will expel the poison from the place in which it is.—*British Medical Journal.*

MORTALITY ACCORDING TO OCCUPATION.

At the recent Congress of Hygiene and Demography, says the *Medical News*, Mr. Ogle presented statistics as to the comparative mortality among those between twenty-five and sixty-five years old engaged in various occupations in England. The death-rate among clergymen being the least, this was taken as a standard of comparison. The following presents the comparative mortality: Clergymen, 100; gardeners, 108; farmers, 114; husbandmen, 126; papermakers, 129; grocers, 139; fishermen, 143; cabinetmakers, 148; lawyers, 152; brush-makers, 152; mechanics, 155; tradesmen, 158; woolen-drapers, 159; shoemakers, 166; commercial travelers, 171; bakers, 172; millers, 172; upholsterers, 173; masons, 174; smiths, 175; laborers, 185; wool-workers, 186; armorers, 186; tailors, 189; hatters, 192; printers, 193; cotton-workers, 196; clerks, 199; physicians, 202; quarrymen, 202; bookbinders, 210; butchers, 211; glassmakers, 214; plumbers, painters, etc, 216; cutlers, 229; brewers, 245; omnibus-drivers, 267; wine-merchants, 274; bass-singers, 300; potters, 314; miners, 331; and hotel-waiters, 397.

THE PHYSIOLOGY OF TEARS.

This subject is considered in a bright and interesting paper recently published in the *Asclepiad.* Fear, grief, and joy, to say nothing of pathos and anger, bring tears to the eyes. They are said to come from the heart: and this is true, for no one ever reasoned himself into weeping without a first appeal through the imagination to some emotion. Tears are the natural outlet of emotional tension. They are the result of a storm in the central nervous system, giving rise to changes in the vascular terminals of the tear-secreting glands. These changes induce profuse excretion of water, and weeping results. In a mild degree some excretion is always in process, to bathe the eye and clear it of foreign matters. The controlling centre is at a distance, though the secretion may be kept up by the small trace of saline substance that is present in the tears themselves. The lachrymal glands lie between the nervous center and the mucous surface of the eyeball. Tears afford a good illustration of the way in which nervous fibers are capable of conveying to a secreting organ exciting impulses from both sides of a gland lying in their course. Afferent and efferent communications bring about a similar result. Internal nervous vibrations and external excitation or reflex action cause a flow of tears. In both instances the exciting impulse is a vibra-

tion. Niobe, "all tears," and the unfortunate pedestrian with a minute particle of steel from the rail of an elevated road in his eye, are unwilling exponents of a similar process. They weep the same kind of briny fluid, in exactly the same way, though from widely different causes. Imagination is at times sufficient to excite the nervous system into the production of tears, without external aid or reflex. Writers and readers of good fiction weep over it alike, and the actor loses himself so entirely in the exigencies of dramatic art that he sheds real tears and the audience shed tears with him. Of a truth, the man who never weeps has a hard heart, and the quality of his intellect may also be questioned.

Emotion, then, affection, grief, anxiety, incite to tears, not pain or discomfort. The pangs of maternity are tearless, though the influence of ether or chloroform may cause some emotional dream that results in weeping. In the earlier days of surgery patients might scream and utter such pitiful cries as to sicken the by-standers, might even faint with pain, yet there were seldom any tears. These, being pure waves of emotion and a relief to the heart, are almost powerless to mitigate pain. Perhaps one who weeps from pain does so from unconscious though selfish pity—in other words, from emotion.

For the tearful, change of scene, mental diversion, and outdoor life are the best remedies. The author quoted objects to alcohol as fearfully injurious. It disturbs and unbalances the nervous system, keeps up a maudlin and pitiful sentimentality, and sustains the evil. Alcohol is the mother of sorrow. An opiate, however, prescribed at night, soothes and controls and really disciplines rebellious nerve centers. Sleep cures tears. And so does Time, the restorer. Persons subjected to many and repeated griefs forget how to weep, and the old as compared to the young are almost tearless. Tears have their value in the life of humanity, not as tears but as signs. They show that grief centers are being relieved of their sensibility, and that the nervous organization is learning how to bear up against sorrow.—*New York Medical Journal.*

SURGERY.

SUCCESSFUL TREATMENT OF A PUNCTURED ORBITAL WOUND OF THE BRAIN.

PUNCTURED wounds of the brain through the orbit are attended with such a large mortality that the report of a successful case is always of interest. Polaillon (*Bull. de l' Acad. de Méd.*, 3e ser., tome XXXVI) had brought into his ward a man into whose left orbit the point of an umbrella was driven so firmly that it was with some difficulty extracted. The patient entered supporting the umbrella with his hands. As it was drawn out by the assistant the crackling of bones was distinctly perceived. Its extremity had penetrated to the depth of two inches, passing upward and outward toward the roof of the orbit. Shortly coma, stertorous respiration, and a weak, intermittent pulse developed.

A large plate of the frontal bone was removed about the size of a silver dollar. The frontal sinus, which was very feebly developed, was not opened. The dura bulged through into this opening, so that the finger could not be entered for the purpose of exploring. The dura was incised, allowing some

blood and cerebro-spinal fluid to escape. By means of the finger the opening into the roof of the orbit was readily found. This was placed far back near the lesser wing of the sphenoid. Five splinters of bone were removed, together with a certain quantity of cerebral matter, and a spouting cerebral artery was secured. The remains of the punctured eye were enucleated, the orbit was thoroughly cleaned out, and a drainage-tube was carried from the trephine opening through the supra-orbital plate and out at the orbit.

In a few hours following the operation the patient regained consciousness, and dangerous symptoms disappeared. The next day the drainage-tube traversing the punctured wound was replaced by two tubes; one passed through the trephine opening, the other through the orbit.

On the eighth day the frontal drain was removed, on the twelfth the orbital drain. The patient completely recovered.—*American Journal of Medical Sciences.*

UPON THE POSSIBILITY OF INFECTION OCCURRING THROUGH A SUPERFICIAL SUPPURATING SURFACE.

THE author made a series of experiments upon animals for the purpose of determining the susceptibility of superficial suppurating surfaces to infectious influences. Rabbits were employed; seventeen of these animals in whom a superficial wound surface was produced were inoculated thereon with staphylococcus pyogenes aureus, and three with staphylococcus pyogenes albus. Suppuration of the surfaces having been by this means established, Sestini proceeded to inoculate the surfaces by means of anthrax bacillus. For the purposes of a control experiment eight other rabbits were inoculated in the usual manner by means of the same bacillus. Of those animals inoculated upon surfaces, the site of a suppurative process, not a single one manifested symptoms of the disease, while the other group very promptly died of the inoculation. The same results were obtained in the use of the virus of chicken cholera. In the case of the inoculated bacillus it was found that no general infection occurred, although extensive local ulceration followed. This latter was not as extensive as in the control animal, although in other respects the behavior of the two animals were quite similar.—Dr. Leone Sestini (Italy), in *Riforma Med.—Annals of Surgery.*

MENTAL SYMPTOMS AFTER SURGICAL OPERATIONS.

KIERNAN (*The Medical Standard*, Volume X, Number III) cites a formidable list of authorities from Ambrose Pare to Horatio Wood, showing the profound nervous effect produced by operation. He has found one hundred and eighty-six cases of profound mental change following operation; thirty-five cases after operation for cataract; sixty-five following gynecological operations, and the remainder resulting from plastic operations, amputations, manipulations, etc. In fifteen cases there was larvated epilepsy precedent to the operation; in ten hysteria major was present; in thirty cases a neurotic element existed; in thirty-five cases the patients had arrived at periods of involution when instability of the nervous system usually results. In ten cases only was the influence of blood-poisoning demonstrated.

The acute types of mental affection following operation are aptly designated as "acute confusional insanity." In the larvated epileptic cases, the neurotic, and the hysterical, the prognosis is good. In some of the cases occurring at periods of involution senile degenerations are precipitated. The majority of blood-poisoning cases died. Typho-mania is sometimes observed.

The moral treatment of the patient precedent to the operation is the best prophylaxis. If to the dread of the operation be added dread of the operator the nervous perturbation will necessarily be far greater. Sedatives and other measures tending to calm agitation are necessary. Quinine is strongly indicated. Opium and not chloral hydrate or the bromides will, as a rule, be found a most valuable aid in most of the cases. In many of the hysterical cases salix nigra and monobromate of camphor give good results.—*American Journal of Medical Sciences.*

RADICAL CURE OF REDUCIBLE HERNIA BY INJECTION OF ALCOHOL.

HINK reports (*Wien. med. Blätter*, Number XLVIII, 1891) fourteen cases of reducible inguinal hernia under the care of Professor Weinlechner, which were treated by repeated injections of alcohol. This method was first proposed by Schwalbe, who found that alcohol when injected into the soft parts causes chronic inflammation, and the consequent formation of indurated deposits, which in the course of time gradually disappear. By frequent repeated injections of absolute alcohol and distilled water, the proportion of the former increasing with the duration of the treatment from twenty to seventy per cent., inflammatory action is set up around the neck of sac, which is followed by adhesions and retraction of the soft parts. In this way, it is stated, the conditions of a radical cure of hernia are fulfilled; the neck of the sac is fixed by adhesions to the inner margins of the inguinal openings, and the peritoneum is so firmly attached to the surrounding structures as to be incapable of further extension. The injections have in many instances to be repeated very frequently. In one case the patient was under treatment for nearly seven months, during which period one hundred and nine injections were made. The results in all but two of the cases are stated to have been very satisfactory, but in one case only was any observation made after the patient had left the hospital. In one case an injection was followed by alarming symptoms of syncope; and in other cases inflammation of the tunica vaginalis, epididymitis, and suppuration were observed.—*British Medical Journal.*

A NEW METHOD FOR RESECTION OF THE ELBOW-JOINT.

THE author, after considering the advantages and disadvantages of the different methods (Erichsen's, Koenig's, etc.), describes his own new method, which is as follows: The inferior extremity of the humerus is sawed through obliquely so as to resemble the adjusting surface of the corner of a picture frame, and with its surface looking downward and forward. Then the superior articular extremities of the bones of the forearm are sawed through, also in an oblique manner, to form the other adjusting framelike surface, the latter looking upward and forward.

The surfaces of the bones are now joined, the forearm being placed in a position of semi-pronation and semi-flexion, so that the forearm rests now at a right angle upon the arm. The particulars of the procedure are: The postero-longitudinal incision is made, followed by separation of the soft parts and the periosteum; the articular extremities are then exposed and dislocation produced, after the method of Langenbeck, the humerus being fixated by an assistant.

A line is drawn which unites the lowest point of the external condyle with the lowest point of the internal condyle. This horizontal line divides the posterior inferior articular surface of the trochlea in its median part.

After this line has been marked out, the saw is conducted through it, being held obliquely, so as to bring it out anteriorly at the inferior border of the coronoid cavity. Thus a surface is obtained which forms with the longitudinal axis of the humerus an acute angle of forty-five degrees. If, however, the morbid process should involve more than the articular processes, the reaction may be practiced more extensively, with the same facilities and equal results. As regards the bones of the forearm, the saw is applied about one and one-half centimeters below the apex of the olecranon, and carried through obliquely below the articular cartilages of the glenoid and sigmoid cavities to come out at the base of the coronoid process of the head of the radius. One obtains, thus, a surface, which forms with the longitudinal axis of the forearm an acute angle of forty-five degrees. Through the above procedure two ample section-surfaces result, which can be well adapted to each other and permit the forearm to rest solidly upon the arm at a right angle. In cases where the junction of the two surfaces is not sufficiently secure, this may be assisted by sutures which are to be introduced at the apex of the angle to be formed. It often happens that one of the surfaces overlaps the other posteriorly. In such cases the osseous projection must be removed in order to avoid irritation of the soft parts, which may cause gangrene. It is, also, of importance to saw through the articular extremities, while an assistant is holding the forearm in a position of semi-pronation, as this position is the most favorable as regards the function of ankylosed forearm.

The author finally remarks that this method of resection of the elbow-joint perhaps has been used by other surgeons, here and there, but as he has not found it stated in the text-books, he thought it not inopportune to put it on record.—Dr. C. Zatti (Bologna, Italy), in *Gazzetta Degli Ospitali.—Annals of Surgery.*

A NEW METHOD OF SUTURING THE INTESTINE, WITH EXACT AND RECTILINEAR APPOSITION OF THE MARGINS.

THE writer has devised a method of suturing the intestine which promises to overcome the disadvantage of Lembert's suture, namely, of the rolling in of the line of sutures. He proceeds as follows: The entire mucous layer of the cut and flattened end of the intestine is so seized with a clamp that its entire circumference, after it has been slightly drawn out, may be clipped at one cut with the scissors. This is easily done if the small intestine be not dilated. If this be the case then a narrow ring of mucous membrane must be excised with

the pincette and scissors. By this process one obtains a margin composed only of the serous and muscular layers, while the mucous stratum lies a few millimeters within the intestinal tube. The margins are then apposed; the needle is so introduced through the serous layer, that the puncture comes to lie two or three millimeters behind the line corresponding to the margins of the mucous layer. The needle then passes obliquely on through the muscular layer to penetrate the layers of the opposite tube in the contrary direction, namely, muscular and serous layer, and appear beyond the line of the mucous layer. Sutures are then introduced in the above way around the entire circumference of the intestine at a distance of three millimeters, one from the other. They are then tied. Care should be taken that the muscular layer lie against muscular layer and the sutures only be drawn tight enough to bring one mucous layer in contact with the other. Exact contact of the mucous margin sutures secures the sutures against infection. This single row of sutures is sufficient to closely coapt the margins; supplementary sutures in the serous coat are unnecessary, as the surfaces of the wound lie well and broadly against each other. The writer cites three cases of incarceration of the intestine treated by resection, which, as regards the intestine, had an uneventful course.—Dr. D. Morisani (Naples), in *Il Progresso Medico.—Annals of Surgery.*

GYNECOLOGY.

REMOVAL OF OVARIES FOR EPILEPSY.

F. Howitz and Leopold Meyer (*Gynäk. og. Obstetr. Meddel*, 1891) describe four cases. The results are, on their own admission, discouraging. The cases were under observation for from two and three-quarters to four years. In all the ovaries were more or less diseased. In one case only was the patient cured. The fits increased during pregnancy. In the second the same symptom was observed, but after the operation the patient's condition but slightly improved. In the third and fourth no improvement followed lactation, yet in the third the epileptic fits had always increased in number and severity during catamenial periods, and from thirteen months after the operation no show ever appeared. In the fourth the fits had ceased for four years, and recurred when the patient was suckling. All the four patients had been subject to fits for over seven years, the first or successful case having been epileptic for thirteen years at the least. In three out of the four complete amenorrhœa followed the operation. In the third there was a typical irregular hæmorrhage from the sixth to the thirteenth month after the oöphorectomy.—*British Medical Journal.*

THE ULTIMATE RESULTS OF REMOVAL OF THE ADNEXA.

In view of the general interest recently exhibited in this subject, the following statements by Tait, made at the recent French Surgical Congress, are important. He divides these cases into three classes—those in which the adnexa are removed for the cure of myomata or metrostaxis, for disease of the tubes and ovaries, and for nervous disturbances. His mortality in two hundred and seventy-one cases of myoma was two and two-tenths per cent.

All but eight of the cases were successful. In patients under forty seventy per cent. of the tumors disappeared; in those between forty and fifty it diminished in size from one-sixth to one-third. There were transient climacteric disturbances, but only one case of permanent psychosis, in a patient who showed evidences of mental derangement before the operation. In five per cent. of the operations for diseased adnexa a suppurating sinus remained. It is necessary, he thinks, to wait longer for a cure in this class of cases than in the former. Persistent pain, exaggerated every month, is common, but it seldom lasts longer than a year after the operation. In only four cases was it necessary to perform a second laparotomy on account of cystic enlargement of the stumps. The writer has found that coitus is less painful after the operation, and that sexual desire is usually present.

He has seldom operated simply for the cure of neuroses, always at the urgent desire of the patient, although he believes that the operation has a future. In the two cases in which a sufficient time had elapsed to judge of the result it was entirely satisfactory.—*American Journal of Medical Sciences.*

CONTRIBUTION TO THE STUDY OF OVULATION AND MENSTRUATION.

COHNSTEIN (*Deutsche Medicinische Wochenschrift*) undertakes in this article to determine whether an artificial irritation of the ovaries is capable of producing the vaso-motor reflex necessary for menstruation, and also what role special conditions, as, for example, irritation of the external genitals, play in the causation of the menstrual flow. In his investigations he employed women whose ovaries could be easily palpated, the object of his investigations being to determine whether menstruation could be brought on by manual compression of the ovaries.

His results are as follows: (1) There exists a periodical and causal connection between the ovarian and the catamenial functions. The ovarian changes precede the uterine, and determine them. (2) If the ovarian activity is suspended, neither menstruation nor any of the accompanying changes in the uterus occur. (3) Ovarian activity may occur without menstruation, as, for instance, during lactation. The functional activity of an ovary can be inferred from its reaction to irritation. (4) Menstruation can be brought on before its regular time, but it is always preceded by changes in the ovary, induced, for example, by irritation from pressure. (5) The ovaries seem to alternate in the production of follicles ready to burst. (6) That Graafian follicles can ripen at any time is not proven, nor can menstrual bleeding or uterine changes occur at any given time in the intermenstrual period.—*Medical and Surgical Reporter.*

OBSTETRICS.

THE DIAGNOSIS OF EARLY EXTRA-UTERINE GESTATION.

THIS is the subject of a paper by J. Halliday Croom (*Edinburgh Medical Journal*, October, 1891). His first case was that of a multipara, in whom the classic symptoms of ruptured ectopic gestation were present. On opening the abdomen, it was found filled with fresh blood and enormous clots. The ovaries

were enlarged and cystic; the tubes unruptured; no gestation sac could be found. The abdomen was closed, the hæmorrhage continued unabated, and the patient died. No post-mortem examination was possible.

In the second case a large hæmato-salpinx was removed, every symptom of ruptured tubal pregnancy being present except the discharge of decidua.

In a third case, a diagnosis of ectopic gestation was made from an enlarged heavy uterus at the left and posterior side of the pelvis; a cystic mass upon the right side which was tense, elastic, and very tender to the touch. When the abdomen was opened, an ectopic gestation of about two months was found, the mass being very adherent to the surrounding tissues. Croom concludes that the following points are of value for diagnosis: (1) The general signs of pregnancy; (2) Displacement of the uterus to one side by a tumor which gradually grows; (3) Passage of decidua with hæmorrhage; (4) Paroxysmal pain upon one side.—*American Journal of Medical Sciences.*

THERAPEUTICS.

CAMPHORATED SALOL.

Dr. Pegon has recently reported in the *Revue de thèrapeutique* some very favorable experiences with camphorated salol in the treatment of suppurative disease of the middle ear. The formula for the preparation, devised by M. Desesauelles, is as follows: Equal parts of salol and camphor are mixed and heated until fusion is complete, without water, alcohol, or any other solvent. The mixture is then filtered and preserved in a yellow glass bottle hermetically sealed. Thus prepared, camphorated salol is a thick, colorless, unctuous liquid, soluble in ether, chloroform, or oil, but insoluable in water. Light and air decompose it rapidly. Its application is neither painful nor irritating, and it seems to possess the property of rapidly curing a distressing and very intractable disease. It is applied upon a small pledget or tampon of cotton-wool: to this may be attached a fine thread by which the patient can remove it after twenty-four hours. The ear should previously be washed out with a weak boric-acid solution, and the washing should be repeated once or twice daily when the tampon is not in position. The applications are made once in two or three days, and, if the suppuration is not profuse, the tampons may be left *in situ* from one application to another. The time required for a cure varies from four to twenty days. Dr. Pegon has found the method to succeed where the more popular ones have failed, and says that even where it has not made a perfect cure it has always diminished the fetor and amount of the purulent discharge—*New York Medical Journal.*

THERAPEUSIS OF SYPHILIS.

Ehrmann (*Centrabl. f. die ges. Ther.*, December, 1891) gives a review of the more recent methods of treating syphilis. The efficiency of mercurial inunction depends among other things on the number of the follicles in the skin, and no greater effect is obtained by rubbing in a larger quantity of the ointment, unless over a greater extent of skin surface. Mercurial injections in exact dosage, have

the advantage of not depending on the patient for being carried out, and of the distinction of the general from the local effects. The disadvantages in using soluble mercurial salts for injection are that they pass through the body rapidly, and that they produce toxic effects more easily. The remains of the syphilitic poison are still present, and it may multiply so as to give rise to relapses. With inunction as well as with the injection of insoluble preparations a depot of mercury is left which is gradually absorbed. According to Lichtenstein, relapses are more frequent after the injection of partially soluble preparations such as the salicylate of mercury than after the more insoluble such as the oleum cinereum (see also Supplement, October 3, 1891). With the latter the injection is made weekly, whereas with soluble preparations it must be made daily, and thus one advantage over inunction is lost. Great care must be taken in cleaning the needle. As to the duration of treatment the limit is generally put down as three years, but it cannot be named for all cases. The author mentions two years. If after two years a relapse occurs (a rare event in the author's experience) or marriage be thought of, an extra year must be thrown in. The object is to avoid rather than to treat relapses. If a relapse occur within a few weeks after the discontinuance of the first treatment (by injection or inunction) one may be obliged to give mercury internally. At the end of three months, whether relapse or not, pills of the protiodide are given. After six months the patient gets seven injections of oleum cinereum at intervals of from five to eight days or twenty to twenty-five inunctions. This is repeated at the end of the first year. If there is a relapse in the first half year—and this must always be treated—mercury is given internally at the end of the third quarter. In the second year the inunctions or injections are repeated twice. If internal treatment is adopted, seventy-five pills of the protiodide correspond to some four injections. Mercury taken by the mouth and absorbed into the portal circulation may be excreted with the bile, and thus the full effect is not obtained. The treatment inaugurated by Fournier is a considerable advance; and though it is not time yet for a statistical statement, nevertheless it is certainly known that hereditary syphilis and severe and early relapses are decidedly diminishing.—*British Medical Journal.*

A PROPHYLACTIC AGAINST INFLUENZA.

EVERY indication points toward a return of a severe pandemic of influenza. On the 24th of December, 1889, after numbering thousands of victims abroad, it suddenly appeared in the United States, and cost more lives than many epidemics of cholera.

The nature of the affection, the marked debility induced by it, and its sequelæ, all point to a remarkable depression of the general system. During its presence in the country, the prevalence and severiey of other acute diseases were largely increased and the mortality from all other causes augmented. This condition of affairs continued for some time after the subsidence of the epidemic.

The value of coca as a tonic to antagonize any tendency to adynamia is too well known to require elaboration here. Its therapeutical effects tend to build up precisely what influenza tends to destroy, a fact instanced by the use made of coca leaves by the natives of Bolivia and Peru, which renders them capable of

undergoing the greatest possible physical strain, and that frequently with sparse nourishment. This remarkable tonic action of coca in medical therapeutics has further been attested by Brown-Sequard, Dujardin-Beaumetz, Ball, Bouchut, A. McLane Hamilton, A. E. McDonald, H. M. Lyman, I. N. Danforth, P. S. Conner, and many other eminent physicians, too numerous to mention in the space at our disposal.

The coca wine made by Mr. Mariani, of Paris, and termed Vin Mariani, is a preparation based on a scientific study of the individual virtues of the several varieties of the plant, conducted with a view to extract from them the most potent components, giving rise to tonic effect. The wine employed as an excipient is also selected with the same idea in mind, its fitness and purity giving the Vin Mariani the agreeable aroma, which is peculiar to it. It is not only indicated as a prophylactic against influenza by the strongest inferences of experimental therapeutics, but its use meets the strongest approval of pure common sense. A wine-glass full should be administered three times a day, after meals, or about half an hour before each meal.—Charles E Sajous, M. D., in *The Satellite* of the *Annual of the Medical Sciences*.

A SPEEDY CURE FOR THE INFLUENZA.

Dr. John Crerar, under the above title, describes a method of treatment which is based, he says, on the microbic theory of the disease. His object in treatment is to put the tissues and fluids of the human organism in such a condition that they will not furnish a suitable nutrient medium for the growth of the specific microbe, or, at least, will antagonize the poisons which it produces. He conceived the idea that this would be best done by increasing the alkalinity of the blood; for this purpose he used bicarbonate of potash.

"This salt," he says (*The Lancet*), "has many advantages. It is not unduly stable to make it difficult to break up in the system. It is also readily eliminated, and thus soon leaves the system; so that the danger of potash-poisoning is reduced to infinitesimal proportions. Having found this salt to answer all my purposes, I have not looked for another, although, according to my theory, other remedies of a similar nature might easily give like results. I give liberal doses (thirty grains) in a teacupful of milk every two or three hours. I add a few drops of the tincture of capsicum, but this is not at all essential.

"A word or two of caution. In two or three cases the action of the heart was weakened to an unpleasant degree; but digitalis and the aromatic spirit of ammonia quickly restored normality. Diarrhœa also sometimes supervenes, but is effectually met by Dover's powder. In cases where weakness was induced by previous disease, or where some other disease was a concomitant, or where pregnancy existed, the action of the remedy was somewhat retarded, but not rendered by any means less certain. Where the salt was intermitted too soon, the symptoms returned; but they readily gave way again on the resumption of the treatment. I trust that those who have the opportunity will test the accuracy of my statements by careful clinical observations, as I feel confident they will obtain equally favorable results; for the remedy acts uniformly and satisfactorily.

We believe that physicians in this country have found salicylate of soda a very efficient drug in influenza.—*Medical Record.*

TANNIN IN DIPHTHERIA.

GOYARD has for several years used the following method of treatment in diphtheria with very satisfactory results ("Traitement Abortif au Croup et de la Diphtherie par le Tannin, G. Carre, Paris, 1891"). The treatment consists simply in the free application of tannin to the naso-pharynx. He uses for this purpose a round sponge, about half the size of an ordinary thimble, fastened to a piece of whalebone. Having first dipped the sponge in water and squeezed it between the fingers, he covers it with tannin by thrusting it into a box containing that substance, without weighing or measuring the dose. The patient being in the sitting position with his head a little raised, the tongue is held down with the left index, which is used as a guide for the sponge. The essential point, according to Goyard, is to get the sponge well beyond the isthmus faucium; after being kept for a second or two against the posterior wall of the pharynx it is withdrawn. When the disease is slight and in the incipient stage one application of this kind is said to be sufficient; in a case of croup or diphtheria following the ordinary course the tannin should be applied every two hours, the frequency of the local medication being reduced as the local and general symptoms of the disease subside.

Dr. Goyard thinks the same method indicated in all anginæ and laryngeal inflammations of miasmatic origin. The earlier the treatment is begun the more successful it is, and he urges the routine use of the tannin method in all cases of sore throat as a preventive of graver forms of disease.—*British Medical Journal.*

PATHOLOGY.

THE PARASITE OF IRREGULAR MALARIAL FEVERS.

DR. M. W. SAKHAROFF (*Ann. de l' Inst. Pasteur*, July 25, 1891) has a note on certain parasites occurring in the blood of patients suffering from irregular malarial attacks. These are different from those found in the "regular" fevers, being small, pale bodies enclosed in the blood-corpuscles, endowed with amœboid movements, and assuming a round shape when at rest. In course of development this amœboid condition undergoes the following modifications: Pigment granules appear, mobility is gradually lost, and the form becomes round. The granules unite into a mass at one side or in the middle of the parasite, and a nucleus previously visible can be no longer seen. During this time the parasite increases in size, but always remains smaller than the blood-corpuscle, of which a large portion is unoccupied. After a time fission commences, and this may be observed in blood drawn from the finger (the parasite described by Marchiafva in connection with regular malaria only divides in the internal organs and not in shed blood). This fission takes place in the interior of the corpuscles, after which the segments, from four to sixteen in number, escape, and either remain free or become enclosed in leucocytes. In these latter further development very rarely occurs. This is the normal life-history, but two modifications may be at times observed: (1) Sometimes the course is more rapid, and fission begins before pigment formation. (2) At other times new crescentic forms appear, and the disease assumes a chronic course. This is a highly interesting form,

and one about which there has been some controversy. The author believes (1) that in cases in which these occur the fever seldom assumes a recurrent form. He considers (2) that usually these crescentic bodies are not developed, although at the commencement the amœboid parasites may be present in enormous numbers. He states also (3) that these crescentic bodies may be found in the blood of patients suffering from an irregular attack, but are very seldom seen in the course of a regular malaria. These crescents change gradually into oval or round bodies. Generally also, as the author has proved by actual observation, some of those round bodies develop a number of motile filaments, at least this has been the case in preparations outside the body; finally they disappear and leave no trace.

Attempts to cultivate the parasite have failed. Fowls also showed themselves insusceptible, and the parasite has not been found in their blood, although these are said to suffer from the malaria. In the blood of some geese, however, affected in an extremely malarial district of the Caucasus, the author found a hitherto undescribed spiral parasite. He is making further researches on this parasite.—*New York Medical Record.*

THE POISON THEORY AND PHAGOCYTOSIS.

SANARELLI says (*Centralb. f. Bakt. u. Paras.*) he showed in Number XIV–XVI of the same journal how the lymph from the posterior lymph sac of the frog possessed the property of rendering anthrax foci inert whether these latter contained spores or not. Pieces of the spleen taken from animals dead of anthrax and introduced beneath the frog's skin, or cultivations brought into contact with this lymph (free from leucocytes), lose their virulence. The lymph acts, not upon the vitality, but on the virulence of these organisms. Experiments have not shown that the lymph is a true and specific capable of destroying the anthrax foci, but that it is an unfavorable cultivation medium.

The organisms rapidly retain their virulence when transferred to a suitable medium. All are agreed that the cells quickly seize upon the bacteria, for they may be seen containing bacteria three to four hours after inoculation. Even while in the cells the organisms may excrete toxic substances, which irritate the heat centers and cause a rise of temperature. Metschnikoff has certainly seen movements in the bacilli in these cells, and this must be evidence of life. He has also seen the partly taken up bacilli grow and capable of forming virulent cultures. The question arises as to the value of phagocytosis as compared with the bacteria-killing properties of organic fluids in refractory animals. Sanarelli says that he cannot believe, with the exclusive supporters of this poison theory, that the leucocytes can only take up the bacilli when these are dead, nor yet with the extreme partisans of phagocytosis that there is a veritable conflict between the leucocytes and the bacteria. He prefers to think that, owing to the unfavorable soil, the pathogenic organisms have their growth checked, and that the leucocytes gradually take them up and remove them from the body. This confirms Petruschky's view that the bacteria-killing action is able to explain of itself, and without the least help from the leucocytes, the immunity of frogs against anthrax.—*British Medical Journal.*

MEDICAL MELANGE.

A STUMBLING-BLOCK TO MEDICAL WRITERS.—Is there ever to be an end of the pranks played by the little Latin word *os*—whether meaning bone or mouth —in medical writings? It is not many months since we called attention to an instance in which the *Centralblatt fur Gynakologie* used the expression "ossis uteri," and now we find the *Lancet* heading one of the editorial annotations in its issue for December 19, "A Case of Defecation *per Orem!*"—*New York Medical Journal.*

VARICOSE ULCERS.—These are among the most troublesome that physicians are called upon to treat, and the following method will be found an excellent one in those cases where extirpation of the veins cannot be performed. The ulcer is washed twice daily with a one to one-thousand bichloride of mercury solution, and immediately after each washing the ulcer is dried and sprinkled with aristol. A piece of gauze is laid over this, then a layer of absorbent cotton, and the leg is snugly bandaged from the toes up to the knees, with a flannel or elastic bandage. —*Medical Review.*

FATAL ELECTRICAL CURRENTS.—Professor Elihu Thompson finds in his experiments on the physiological effects of alternate currents that the danger of the current diminishes as the number of alternations per second is increased. Thus it took twenty times as strong a current to kill a dog when the alternations were four thousand five hundred per second than when they were one hundred and twenty per second. When the alternations were three hundred per second, the current was only half as dangerous to life as when the alternations were one hundred and twenty.—*Medical and Surgical Reporter.*

THE DEPORTMENT OF THE PHYSICIAN.—The *British Medical Journal*, commenting on the veto by the Governor of Georgia of the "Drunken Doctors' Bill," says: "It is to be feared that the Georgia legislators do not stand alone in wishing to impose on the members of the medical profession a code of ethics different from that which is found sufficient for the rest of mankind. It is no doubt flattering that we should be thought to stand on a higher plane of morality than ordinary men, but at the same time this giddy ethical elevation has its inconveniences. A doctor is, after all, human, and it would be to the last degree unjust to condemn him to professional ruin for an offense which entails no such heavy penalty in the case of lawyers, engineers, men of business, and, we may venture to add, legislators. There might be something to say in favor of making drunkenness in itself a punishable offence wherever, or by whomsoever committed, but medical men may not unreasonably complain of being singled out from the community as fit objects for special temperance legislation."

AN UNUSUAL NEUROSIS.—Helmuth (*Casopio Ceskych Lekaru*) has reported the case of an unmarried, intelligent teacher, twenty-five years old, with no neurotic family history. Menstruation was regular in time but protracted in duration, and always accompanied with pain. Following an injury to the left eye from a broken violin-string, it was noticed that reading readily caused annoyance. On examination no lesion of the eyes could be detected. There was considerable headache. Soon it was observed that on excitement or emotion the left half of the face flushed and became warm, and in the course of two or three seconds the

left side of the head and face became the seat of profuse prespiration; the left ear became purple, and from the auditory canal there flowed an aqueous discharge. There was a sense of fulness in the left nostril. At the same time the right side of the face became pale, dry, and cold. If the provocation was intense, the left arm up to the elbow-joint became red, but without perspiration. The phenomena were aggravated during menstruation. Improvement took place as menstruation was regulated and existing constipation was overcome. Iron and aloes were the medicaments employed.—*Medical News.*

THE KEELEY CURE.—Dr. H. E. Whitsey writes to the *Medical World* that the following produces a mixture which comes very close to the much-vaunted one used by Keeley:

℞	Sodio-auric chloride, ...	gr.xij.
	Ammonium chloride, ...	gr.vj.
	Strychnine nitrate, ...	gr.j.
	Atropine, ...	gr.¼.
	Extract cinchona comp., fluid, ...	℥iij.
	Extract coca, fluid, ...	℥j.
	Glycerine, ...	℥j.
	Water, ...	℥j.

Misce. Signa:—Take a teaspoonful every two hours when awake, and the following hypodermic injection every four hours: one-tenth grain of the chloride of gold and sodium and one-fortieth grain of the nitrate of strychnine. This will produce the same symptoms and same results as the Keeley cure.

EUROPHEN.—This new antiseptic medicament designed to replace iodoform is obtained by the action of iodine upon isobutylorthocresol. Its pharmacology and bacteriology have been studied by Siebel, and its therapeutic actions by Eichhoff. Europhen is an amorphous, yellow powder, exhaling a slight odor resembling that of saffron. It is insoluble in water and in glycerine, and is more soluable than iodoform in alcohol, ether, chloroform and the oils. Europhen adheres better than iodoform to the skin and to open wounds, and an equal quantity of it, by weight, will cover a surface five times greater. This iodine of isobutylorthocresol is not toxic. Dogs were found to take two to three grammes of it with impunity, and the human organism will bear one gramme of it without unpleasant phenomena save a slight feeling of weight in the stomach. The urine of patients who had absorbed europhen did not contain iodine. Eichhoff employed it successfully in dressing both hard and soft chancres. He used it as a powder, and also in the form of a one per cent. or two per cent. ointment. He furthermore employed it successfully in hypodermic injections for syphilitic patients suffering from the secondary and tertiary symptoms of syphilis. These injections consisted of one gramme of europhen to one hundred grammes of olive oil, and of this, one-half to one cubic centimeter was injected daily in one dose. Eichhoff also employed europhen in varicose ulcer and ulcerative lupus, as well as in eczema, psoriasis and favus, in all of which it proved to be efficacious. Ointments containing one per cent. to two per cent. of europhen are as strong as need be used. Five per cent. ointments caused a certain amount of irritation.—*Lasemaine Medicale*, July 29, 1891.—*Repertoire De Pharmacie*, August 10, 1891.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

CATARACT.*

By EUGENE SMITH, M. D., Detroit, Michigan.

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE DETROIT COLLEGE OF MEDICINE.

Somebody has remarked that the science of ophthalmology one hundred years ago consisted of three things, ophthalmia, cataract and amaurosis. In speaking of cataract to-night I will endeavor not to weary you by a prolixity which would ill-befit the hour.

The proceeding of Daviel, which consisted in the extraction of the cataract through a large corneal flap occupying about two-thirds of the cornea, was one of the grandest advances in ocular surgery. Grave complications, however, peculiar to this operation (prolapsus and adhesion of the iris, suppuration of the cornea), and the impossibility of extracting a cataract to which the iris was adherent, led to the seeking for other methods.

To Von Graefe was given the good fortune to imagine the linear method combined with iridectomy, which, graced with the great renown of the man, and the real advantages that the new operation presented, was soon adopted and practiced by the ophthalmic surgeons of the world; and it may be said of it that, except in a few cases—few and far between,—it became *the* operation for cataract, notwithstanding the fact that many reproaches were cast at it on account of the mutilation of the iris which constituted a defect both cosmetic and optical; then, too, it was not infrequently followed by untoward results, more or less grave. For a number of years several of the leading French oculists have been seeking a way to return to the extraction of cataract without excising a piece of the iris. Was this desire born of caprice, or a wish to uphold their national pride (Daviel was a Frenchman, Von Graefe a German)? Neither. Operators have ever recognized the fact that a successful flap extraction leaves the eye in the most perfect

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

condition, and consequently vision is better than when a section of the iris is removed. To reach perfection, as nearly as it is alloted man in this world, was doubtless their desire. Graced with some recent discoveries in the domain of surgery, certain complications in the old flap extraction have been, let me say, about annihilated. The suppuration of the flap, for instance, which was the *bete noire* of the olden time, has been made to nearly disappear by the use of antiseptics, or rather let me say, by asepsis. We know that when the wound suppurates after an operation for cataract, it is invariably due to infection by pathogenic germs. To prevent this infection it is very important to render the lids, the conjunctiva, and the cornea, thoroughly aseptic; also the hands and the instruments. At the present day this is easily accomplished, as far as the eye is concerned, by the employment of a solution of cocaine which, on account of its local anæsthetic effect, enables us to quite thoroughly wash the eye with the so-called antiseptic lotions. The solution of cocaine should be fresh and perfectly aseptic, being made with freshly boiled water or a weak solution of sublimate, or boracic acid. The antiseptic solution may consist of bichloride of mercury, boracic acid, or any of the well known lotions, it matters little which, if we do not use them too strong.

What knife shall be used, the large triangular knife of Baer, or the delicate little knife of Von Graefe? Like the use of the aseptic lotions, it matters but little. Most surgeons use the Von Graefe knife.

What shall be the size of the flap, the Daviel two-thirds, or the De Wecker one-third? Experience has proved that the De Wecker flap answers the purpose fully; it is made in the cornea just [illegible] limbus conjunctivalis.

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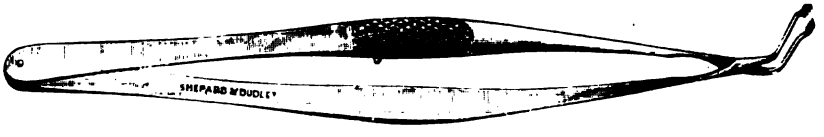
The tendency of the iris to prolapse, which was a feature of the old flap method, is not entirely eliminated from the modern flap operation, but thanks to the use of eserine which contracts the pupil, we are enabled to ward off this tendency in most cases. We are indebted to De Wecker, of Paris, also, for the suggestion to use eserine, even to inject it into the anterior chamber. Not only does it contract the pupil powerfully, but it has also marked antiseptic properties.

I think to cocaine must largely be given the credit for our ability to return to the ideal method of extracting cataract. It does away with all pain and consequent straining and convulsive movements of the muscles, and permits of free and easy, not hurried, manipulation. In case of prolapse of the iris it also enables us to use the spatula for reduction without causing pain.



How shall we dispose of the capsule? The ideal method is to tear out a piece of it with forceps and thereby do away with the necessity for subsequent dicission, so frequently necessary when the capsule is cut or torn by the cystotome. Some weeks ago I had the pleasure of showing the society a forceps I devised for this purpose, and which I have found in many trials to work charmingly.

The cataract having been delivered and the eye and wound bathed with our aseptic lotion, how shall we dress the eye? I instill some drops of a one to four

per cent. solution of eserine, place a bit of absorbent cotton wetted with bichloride solution over each eye and fasten in place with a strip of adhesive plaster extending from the forehead to the cheek. This is all the dressing I find necessary. It is not put on tight enough to press the eyeball and prevent the coaptation of the edges of the wound. Twenty-four hours later this dressing is removed, the eserine dropped into the eye, and a fresh dressing applied which, if no complaints of pain are made, is not disturbed again for two days. I usually remove all dressings at the end of a week or ten days.

Let me claim your attention for a few moments longer, to another form of cataract that requires a different kind of operation, an illustration of which I have the pleasure of showing you in this young lady. During the past three weeks I have extracted cataract from each of her eyes, and they "speak for themselves," and bespeak laurels for this style of operation. I refer now to soft cataract, either congenital or traumatic; the form of cataract which occurs between the ages of infancy and thirty. I have practiced this method for many years and have ever found it to give perfect satisfaction. It is the linear extraction made with a small triangular knife. Till lately, I pushed the point of the knife forward into the lens after puncturing the cornea; then by gentle pressure caused the soft cataractous matter to escape through the wound in the cornea. Recently, I have used the forceps for tearing out a portion of the anterior capsule as in the flap extraction, with great success, thereby doing away with the necessity for subsequent dicission of the capsule. The old-time needle operation was always followed by a thickening or growing tough of the capsule during the process of absorption. This usually requires a further operation.

By the linear method we escape the dangers incident to absorption, and instead of weeks or months, and several operations being necessary for a restoration, we require but a few days.

It may be asked, how early would you operate for congenital cataract? Hardly under a year of age, and perhaps not till later. Much would depend upon the case, that is, condition of the eye, condition of the child, kind and condition of the cataract.

In conclusion, let me say, in no case of human woe is the triumph of our science more signal than when a person, blinded by cataract, is restored to sight and happiness. I am happy to say restoration is the rule.

TREATMENT OF SCARLET FEVER.*

By CARL BONNING, M. D., Detroit, Michigan.

Scarlet fever being one of those diseases which, in our city at least, the general practitioner is called upon to treat almost daily, I thought it might be of interest to you to have your attention called to a plan of treatment which has yielded excellent results in my hands.

About two years ago I read a short report by Dr. Shakhoosky, describing the brilliant effects of salicylic acid in the treatment of scarlet fever. Not only should the disease run a very mild course, when treated from the beginning

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

with salicylic acid, but complications and sequelæ were of rare occurrence, and especially nephritis was never encountered when this drug was administered from the beginning.

It was further claimed that, if salicylic acid was given in small doses to those who were exposed to the contagion of scarlet fever, an infection would only rarely take place.

I was so impressed with these extremely favorable results, that I at once commenced to use this treatment in my practice, adding, however, to this internal medication, warm baths, as I had employed them before in my practice in treating scarlet fever.

Since I adopted this plan of treatment, I have had fifty-one cases of scarlet fever under my care, and every one of these cases was treated alike, with the exception of three cases, all occuring in the same family, in which the warm baths had to be omitted, as no bath-tub was obtainable. The youngest of these patients so treated was nine months old, the oldest one twenty-eight years.

In each case I gave from the beginning one grain of salicylic acid, suspended in water and syrup of orange peel, every two hours during the first four or five days. To children below the age of two years, half this dose was given. In most cases, after the fourth or fifth day, the temperature would be almost normal, and would not rise any more, and the patients would feel quite comfortable. Beginning with the fifth or sixth day and continuing it to the end of the first week, the salicylic acid was administered only every three hours, and after this, for two or three weeks more, one grain of salicylic acid was given four times a day.

In connection with this internal treatment, I ordered a bath of five minutes duration and a temperature of 90° to 92° Fahrenheit, to be given every morning and every night during the first week, and after this time one bath every night only, for two or three weeks more. In very severe cases, with high fever, I had the baths given every three to four hours during the first week.

I am pleased to say, that I can endorse most heartily almost everything which was claimed for the salicylic acid. Every one of these fifty-one cases, treated as described, made a good and speedy recovery, except one. The course of the disease was in most of these cases a very mild case, the patients after four or five days feeling generally so well, as if nothing ailed them, and most of them were allowed to be out of bed after two weeks.

In five cases, where there was a very intense infection, and in three more cases, which were complicated with diphtheria from the beginning, it took about a week until the patients felt at all comfortable. No other complications or sequelæ of any kind were observed, except in two cases an inflammation of the middle ear. In four cases the children were suffering at the same time from scarlatina and varicella, and in five cases mumps and scarlet fever were present at the same time. I hardly need add that complications arising during or after scarlet fever have to be met by appropriate treatment.

One case, a boy, fifteen years old, died on the third day. This was one of those three cases referred to above, where the baths could not be used. All three cases were very severe ones from the beginning, and the hygienic condition of the sick room anything but good, the room in which the three patients had to be kept being a very small and dark one. The warm baths I added to

the salicylic acid treatment for various reasons, and I would not like to treat scarlet fever without them. In the first place, they reduce somewhat the temperature of the patient; secondly, they relieve to a great extent the very annoying itching of the skin so frequently met with in this disease; thirdly, they hasten the process of desquamation; fourthly, they relieve the kidneys, by inducing free perspiration; and lastly, they very often bring on quiet and refreshing sleep.

The administration of salicylic acid to persons exposed to the contagion of scarlet fever, for the purpose of protecting these persons from taking the disease, is according to my experience a failure, for in several families with a large number of children, where it was impossible to separate the healthy ones from the sick ones, and where the salicylic acid was given, every child who had been exposed to the disease came down with it in due course of time.

In concluding, I should ask the members of this association to give the treatment of scarlet fever, as outlined in this short paper, a trial, and to report results, for you will readily understand how important it will be if we have found in salicylic acid and warm baths such a safe, reliable and convenient remedy in the treatment of the disease, as the experience of others and myself lead me to believe.

HÆMOPTYSIS: ITS PATHOLOGY AND TREATMENT.*

By GEORGE DUFFIELD, M. D., Detroit, Michigan.

PROFESSOR OF PATHOLOGY AND PHYSICAL DIAGNOSIS IN THE DETROIT COLLEGE OF MEDICINE; MICROSCOPIST TO HARPER HOSPITAL; ATTENDING PHYSICIAN TO SAINT MARY'S HOSPITAL, ETC.

In presenting a subject for your consideration, I have selected a familiar one. I do not wish to be understood as believing hæmoptysis to be a disease *per se*, nor do I intend to weary you with a long recitation from the books about the history of this malady, but from a few cases that I have recently seen, I hope to draw some conclusions that will be suggestive of a better treatment of this frequent and troublesome complication, to control which often demands energetic measures.

Most of the cases that I present were, at different times, in Harper Hospital, and it is through the kindness and courtesy of Dr. Shurly that I am able to present them here this evening.

Case I.—Mr. B. O. C., aged twenty-seven. Entered Harper Hospital September 23, 1891. A lumberman by occupation. Temperature 100°; respiration 25 per minute; pulse 100. Right side, from apex to sixth rib, dullness on percussion. Auscultation revealed bronchial respiration, absence of vesicular murmur, absence of respiratory murmur, prolonged expiration, thick moist rales, decrease of vocal fremitus. At base of lung in axillary line, creptant rales.

His family history was good. His previous history was as follows: When nine years old he suffered from scarlet fever. When sixteen, had an attack that was called epilepsy, the seizures recurring at short intervals for seventeen months, when they ceased and have never recurred. In the spring of 1887, he fell down stairs striking heavily on his back. The next morning he expectorated

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some dark blood. During the following day he had a severe hæmorrhage losing about half a tea-cup of blood. During the latter part of the same year he began to have trouble with his throat. He caught cold easily; each time it seemed to affect his throat and upper part of chest. In December of 1887, had three small hæmorrhages. In March, 1888, he lost nearly a pint of bright blood at one bleeding. Then for several months, at irregular intervals, he expectorated more or less blood. In the winter of 1889–1890, he became rapidly emaciated, having severe night sweats; he lost over thirty pounds. At this time he had the grippe which concentrated itself on his weakened lungs. Diarrhœa never complicated his disease. From these severe complications he recovered so as to be able to ride a safety bicycle by the middle of May, 1891, and could ride twenty and thirty miles without fatigue. In June he was accidently thrown—he fell striking his left side. This was followed by a severe hæmorrhage from the lungs. In February, 1891, he suffered from a severe attack of pneumonia, that affected the right side. September 24, the day after entering the hospital, he lost about one-half pint of blood. September 25, he expectorated mucus streaked with blood. October 2, had slight hæmorrhage, but to the date of this writing none have since occurred.

Examination of his sputum shows the bacillus of tuberculosis present. His temperature has ranged from 99° to 100° since he has been in the hospital. His present condition, December 16, shows the lung to be partly consolidated, with crepitant rales in the lower portion, and loss of vesicular murmur, with bronchophony.

Case II.—Mr. G. M., aged twenty-four, a pattern-maker. Entered Harper Hospital September 2, 1891. His condition was as follows: Pulse 120; temperature 101°; respiration 30 per minute. Very weak physically; confined to bed; had no appetite; was in extremis.

He had been under the care of Dr. A. W. Imrie for a short time before entering the hospital. His family history had been good and showed no hereditary disposition in his case to tuberculosis. Last February he was exposed to damp and cold. While in a heated condition he caught a severe cold that he called "the grippe," and was confined to his bed for several weeks with cough, fever and expectoration. Up to this time he had had no hæmorrhages and throughout his entire sickness he never had diarrhœa. He was able to resume work for a month or six weeks, when he was again confined to his bed with pain in chest, accompanied by hard cough, night sweats, great exhaustion, and rapid emaciation. Following this attack he had more or less throat trouble. September 3, the day after entering the hospital the examination of his sputum showed bacilli tuberculosis present. The physical examination showed that the left lung was breaking down with tubercle, a large cavity with moist walls in the infra-clavicular portion. September 5 he expectorated a little blood after coughing. September 7 he was suddenly seized with violent bleeding and died almost instantly.

The autopsy showed signs of general tuberculosis, the hæmorrhage coming from the ulceration and perforation of a large vessel in the wall of the cavity. All portions of the lungs were filled with blood. He had literally been drowned in his own blood.

Case III.—Mr. S. F., aged fifty-nine. Admitted to Harper Hospital May 22, 1891. Condition on entering: Temperature varying from 99° to 103°; respira-

tion 40 to 50 per minute; pulse 132. Right lung was completely consolidated, due to tubercular infection.

The family history has been good. Has suffered from throat trouble from childhood. Three years ago he began to lose flesh; had cough and poor appetite. His sputum was streaked with blood and was mucous in character. He spent a year and a half in the southern part of Georgia and seemingly recovered his wonted health until December, 1890. He then caught cold; had a severe cough which was dry without any expectoration. He began to lose flesh and there has been a gradual loss ever since. Bloody mucus followed the dry stage and continued to be expectorated up to the end of May, 1891.

On entering the hospital the expectorated material was caseous with more or less bright arterial blood which showed that the capillary congestion in the lung was very great and that the vessels were unable to stand the extra amount of blood within them. Bacilli of tuberculosis were very numerous in the sputum. The hæmorrhage gradually increased, the character being more arterial and in quantity varying from two drachms to two or three ounces. Between May 24 and June 14, the hæmorrhages came on between 10 P. M. and 4 A. M., and came on, not from any exertion upon the part of the patient, but probably from an extravasation or rupture of the capillaries lining the tubercular portions of the bronchi. After June 1, his temperature began to rise, without morning intermission until June 14, when he died from exhaustion. His consolidated lung did not at any time show a symptom of resolution. There was no autopsy held on the case.

Case IV.—Mr. P. F., aged twenty-six; height, six feet three inches; weight, one hundred and sixty-two pounds; habits good. Came under my care August 5, 1891, with the following history:

In April, 1890, was the superintendent of the janitors in the city hall. The position kept him confined in the dusty portions of the building. He was not troubled with a cough or expectoration. One night early in May he went to bed in his usual health. About 2 A. M. he awoke from a sound sleep and expectorated some fresh blood. The same day at noon he had a hæmorrhage on the street, expectorating three or four mouthfuls of fresh blood. About May 31 he consulted Dr. Shurly, whose physical examination showed: Slight dullness over left lung, crackling rales at apex, weakened respiratory movement, prolonged expiration. Under the doctor's care he improved steadily, until July 1, when one day while walking on the street, he expectorated a mouthful of fresh blood. During July and August he had frequent hæmorrhages, varying from two to four drachms. From the 5th of August until the 10th of September the hæmorrhages ceased. September 11 and 12 the bleeding became alarmingly frequent and copious. The amounts varied from one-half ounce to twelve ounces at each hæmorrhage. The blood came without effort though coughing increased the flow. By auscultation crackling and mucous rales could be heard over the whole left lung, the infra-clavicular region being the point from which the hæmorrhage seemed to come. The mucous rales could be heard for a long time after a hæmorrhage. October 1 he lost about four ounces of blood. From that date to the present, December 16, there has been no further hæmorrhage. There has been almost no rise of temperature during this whole attack. When the bleeding was hard his temperature stood half a degree below normal, and only once or

twice has he had fever and that was at night. His appetite has been pretty good. He has never had night sweats or diarrhœa or dyspepsia. He has been losing flesh slowly in the past six months, having lost about twenty pounds.

Examination of the sputum show tubercular bacilli. He has often said that he knew he was soon to have another hæmorrhage because of the irregular action of his heart. Irregular in force and often skipping two or three beats in a minute. His nails and finger tips are quite well injected. They do not show the clubbing so often observed in tubercular diseases.

Case V.—Miss M. F., a sister to the former case, aged nineteen, a vest-maker and a hard worker. Had always enjoyed good health. She had never been sick since childhood. Her family history was good.

About the middle of August, while I was away on a vacation, Dr. F. W. Brown had the care of her brother. She became very much alarmed about her brother's condition and his frequent hæmorrhages and she, too, had a slight bleeding from the lungs. It came at a time when she was about to menstruate. Dr. Brown was unable to find any disease of her lungs and I supported him in his opinion on my return. Dr. Brown believed her hæmorrhage to be one out of sympathy for her brother. She was sent to visit friends in a distant part of the city and not allowed to work or go home, and the change of scene worked her cure. She has had no hæmorrhage since, and has grown quite strong and fleshy.

Case VI.—Miss L. S., of Cleveland, Ohio, aged twenty-five. Entered Harper Hospital, September 11, 1891. Was under the charge of Dr. Shurly, but I saw her frequently and when she left the hospital for a two months' stay at a cousin's I attended her daily. She was well nourished and seemed strong and well in her face. Her early history is as follows:

Her mother died of phthisis that was complicated with the hæmorrhagic type. A father, brother and sister are alive and in good health. As a girl she was perfectly well, not even having the usual diseases of childhood. About eight years ago she undertook the care of her mother who was then suffering from tuberculosis. The mother required a great deal of nursing and this daughter took the entire charge. She slowly acquired her mother's disease. In 1887 she began to run down in health, felt tired and languid and had a hacking cough. Early in 1888 she had quite a hard hæmorrhage from her lungs, but she told no one and continued the care of her mother. Later in the same year she had several hæmorrhages and night sweats and was obliged to spend the winter of 1888–1889 in the south. She improved in health and for six months had no return of bleeding; she gained about twenty-five pounds and was able to exercise out of doors. Since then she has spent her winters south, but the gain she made while in the south was always lost when she returned to the north. Rarely has her temperature been higher than 101°, and usually it stood at 98.5°; pulse varied from 72 to 84 per minute. Rarely has there been any expectoration other than the bloody mucus following a hæmorrhage. The examination of the sputum has been frequently made, but the bacillus of tuberculosis has only twice been found, and then they were few in number.

Her condition on entering the hospital was as follows: On auscultation, just before a hæmorrhage the tubes were dry, and one could distinguish in the superior mammary region an obstruction to the passage of air, and in the same line and space one heard a broncho-vesicular murmur, which showed a dilata-

tion of a bronchial tube. After a hæmorrhage the rales were moist and varied in intensity from sonorous to sub-crepitant depending upon the portion of the lung that contained the blood.

There has been a marked periodicity in the occurrence of the hæmorrhages that is wholly unexplainable. They are expected a day or two before the menstrual flow begins. Then ten days thereafter another hæmorrhage takes place. This repetition has occurred four times to my actual knowledge. The bleeding has come on mostly at night when patient has been asleep. She has been awakened by no apparent cause. She may or may not cough, when suddenly the hæmorrhage comes on. To show you how suddenly these hæmorrhages come on, I will say, that just before one of her most recent and severe bleedings, I saw her at 9:30 in the morning. She was in excellent spirits, her usual state. Pulse 76; temperature normal. I left her wishing her a comfortable night. At 10 P. M., I was summoned to come at once for she was bleeding profusely. There had not been a premonitory symptom to show that the hæmorrhage was so close at hand.

The quantity of blood lost has been greater than in any case I ever saw. The blood would pour out of her mouth in a stream and with great force; from six to twenty-four ounces would be lost in a moment. Then she would sink back exhausted, and for a day or two after she would expectorate bloody mucus, but rarely would a second hæmorrhage follow the first one. Often the blood would be drawn down into the air vesicles by the act of inspiration and for a long time the vesicular murmur would be lost entirely, but would afterward be heard. Her power of recuperation from these excessive hæmorrhages is extraordinary. Under the action of medicine, coupled with her great will power, and a good digestion, new blood is made very fast and the mucous membranes assume in a few days their normal hue.

The pathological condition in this case is vague, but I am led either to think because of its sudden severe type it is due to an aneurismal condition or an apoplectic condition with tubercular infiltration of the arterioles.

Case VII.—Mrs. T., aged twenty-eight; married. She came under my care October 18, 1891. During the birth of her only child about May, she sustained a laceration of cervix and perineum and suffered from puerperal fever, complicated by pneumonia; the lung disease had been overlooked. When she was first seen she was suffering from extreme anæmia. Her left lung was consolidated. Her heart was irregular and its sounds showed insufficiency of mitral and aortic valves. For a while she improved, but slowly she sank down, her lungs became œdematous, there was great transudation of blood into the bronchi, and with every cough fresh blood was expectorated—mixed with tenacious mucus. The form of hæmoptysis was undoubtedly due to the mechanical interference with the passage of the blood through the lungs and the lack of force in the feeble heart. At no time was there any active hæmorrhage. The patient died from exhaustion about one month after coming to the city.

This case illustrates a very different class of cases than those heretofore mentioned, but is of interest to show the various kinds of blood spitting. Dr. Shurly was associated with me in the care of this case.

Case VIII.—J. T., aged forty-two. November 12, while crossing the street, he was struck by the shaft of a rapidly approaching wagon directly over the apex

of the heart. The force of the blow was sufficient to make him insensible for about twenty minutes. The force of the blow caused a fracture of the rib, but there was no displacement. For four or six days after the injury he would occasionally raise a little blood. A circumscribed pleuritis and an injury to the lung over point of injury and a localized roughened respiratory note is all that was heard. Resolution went on rapidly—he was confined to his bed for several days but he has made a good recovery. His previous health was excellent.

These eight cases illustrate fully the various types of hæmoptysis that most frequently occur in practice. Their pathological conditions are for the most part different, but their treatment is about the same. The main object we desire to accomplish is:

(1) To clot the blood about the bleeding part.

(2) To relieve the vascular tension.

(3) To contract the blood-vessels of the part.

(4) To maintain these conditions for such time as to allow enough plastic lymph to be thrown out that will hold the open vessel and check the hæmorrhage by the formation of new connective tissue.

The *treatment* of hæmoptysis by administering medicine to the patient has uniformly failed. Morphine, atropine, ergot, ice, ipecac, turpentine, digitalis, etc., were all tried at various times and all failed. Their action was more or less perverted because of the slow digestive action in the stomach, due to the nervous shock from loss of blood or from the swallowing of blood. The chief medication for the immediate attack has been hypodermic medication of morphine and atropine, and a solution of purified ergotin, as obtained from Parke, Davis & Company. The following is the way by which it is manufactured. The product is prepared by first extracting the drug with benzine and then with alcohol in order to deprive it of fatty and other objectionable principles, and finally with water, the extract yielded to the latter being evaporated to a proper consistency. This ergotin is a very different article from the normal liquid, and represents several times its weight of crude drug; whereas the latter is adjusted to such a strength that each cubic centimeter represents one gramme of ergot of standard quality. Four or five minims of this solution of ergotin is diluted with ten minims of water; the whole is then boiled a moment and injected hot, over the seat of hæmorrhage. Its action is almost immediately felt and one such injection is usually sufficient to check the severest hæmorrhage. Following the ergotin, I usually give a hypodermic of one-quarter grain of morphine and one-sixtieth grain of atropine. This will allay pain, nervous irritability and cough, and is a very necessary mode of treatment. I do not give alcoholic stimulants because I am afraid of the effect of the stimulation and then of their secondary depressing effects. The old method of feeding the patient only *cold* things is pernicious. It delays digestion and causes distressing gastric disturbances. I prefer good wholesome warm foods—those that tend to the most rapid assimilation—that go to make new blood, which means life to the patient.

The process of blood reproduction differs greatly in the different sexes. Males are greatly prostrated by a slight hæmorrhage, and their recovery is very slow. The central nervous system seems to receive a terrible shock and vital centres that control blood formation are slow to act, while in the female it is marvelous how soon the circulation rights itself, the tissues assume their normal

hue, and the strength returns. Just why this is, it is hard to say. Doubtless the reparative processes connected with the function of menstruation predisposes to a more active reproduction of blood elements than is seen in the opposite sex.

The most satisfactory after-treatment is to send our patient to another clime where the atmosphere will so act upon the case as to produce healing and eventually work a cure. For those who remain in this climate, sooner or later other hæmorrhages will follow or the case will slowly run into one of tuberculosis. The selection of a proper climate is a hard matter to determine, yet we have all varieties to choose from. Shall it be north to Lake Superior region, south to the Gulf, east to the sea-shore, or west to the mountains? Several years ago Dr. Williams, in the *London Lancet*, reported interesting statistics on one hundred and forty-one cases of phthisis treated at an altitude varying from five thousand to nine thousand feet above the sea level, and reported that hæmoptysis was of rare occurrence in the mountainous regions. In "Bell's Climatology," page 82, speaking of extreme altitude, he says: "An elevation of sixteen thousand feet takes off one-half the air pressure which at the sea level is fifteen pounds to the square inch." This altitude is much too high, for people who are in health suffer the distressing symptoms that come from breathing rarefied air. One thing is in favor of an altitude of eight thousand or nine thousand feet, it is aseptic, it is pure, dry and cool, it arrests decomposition. It increases the healthy production of new lung tissue by making the blood purer, and it relieves and lowers arterial tension, thus stimulating the capillaries of the skin and so lessening the likelihood of internal congestions. An outdoor life in such a climate where the sun is said to shine brighter every day than in this climate even with snow on the ground, increases the appetite, improves all tissues of the body, and diseased lungs that have been the seat of frequent hæmorrhages heal so that the life of the person may continue a long time.

PRACTICAL PATHOLOGY FOR BUSY PRACTITIONERS.

By HENEAGE GIBBES, M. D., C. M., F. R. M. S., Ann Arbor, Michigan.

PROFESSOR OF PATHOLOGY IN THE UNIVERSITY OF MICHIGAN; CONSULTING PATHOLOGIST TO HARPER HOSPITAL, DETROIT.

FIRST PAPER.

Many physicians who graduated a few years ago find themselves unable to keep pace with the rapid advancement of microscopical technique and cannot spare time to take a laboratory course. I have been requested by several friends to write some short papers for The Physician and Surgeon, giving plain practical details for the ordinary work that a general practitioner would require to enable him to keep up with the times.

EXAMINATION OF SPUTUM FOR TUBERCLE BACILLI.

This is one of the simplest operations and one required so frequently that every practitioner should be able to satisfy himself as to the presence or absence of tubercle bacilli in each individual case, not to establish his diagnosis by the facts obtained, but to confirm the diagnosis arrived at by careful physical

examination. It should always be remembered that the presence of tubercle bacilli in the sputum denotes a breaking down of tissue somewhere in the respiratory passages or lungs, while the absence of tubercle bacilli in the sputum does not prove the absence of tubercular lesions, as the bacilli may be so shut off from the air passages they cannot reach the sputum.

Sputum for examination should always be obtained in the early morning. That coughed up on awaking from the night's sleep is sure to have come from the lungs, while the expectoration made in the physician's office may be from the back of the pharynx and may contain no bacilli, although they are numerous in the lungs.

For the examination of sputum the following apparatus is required: A microscope, having a power magnifying about three hundred diameters, with the A or No. 1 eye-piece,—this would be a dry one-sixth inch; some glass slides and cover glasses; two needles in holders; a sputum spreader; a pair of cover glass forceps; two two-and-one-half-inch glass capsules; alcohol; mounting fluid; double stain for tubercle bacilli.

Having obtained a specimen of morning sputum, it is poured into one of the glass capsules and placed on a piece of black paper. In this manner the component parts are more easily seen. Sputum varies in almost every case: in some it is very tenacious, while in others it is watery. First look for small whitish nodules about the size of a millet seed. If these are found, take up one with the sputum spreader and a needle and place it on a cover glass; then mash it up well with the sputum spreader and spread the whole evenly over the cover glass leaving about one-eighth of an inch of the periphery clear; then cover with something to keep off the dust and let it dry. If none of these white specks are present and the sputum is very tenacious, a small portion can be cut off by crossing the sputum spreader and needle and drawing them apart. The portion thus isolated is taken up, placed on the cover glass and spread evenly as before. If the end of the sputum spreader, for about a quarter of an inch, is slightly bent it will facilitate these operations. Having spread the sputum thinly on the cover glasses they must be allowed to dry in the air, and it is best to cover them with a tumbler or anything that will keep off the dust. Sputum on the cover glass should never be dried in the flame of the spirit lamp. If this is done some portions are coagulated by the heat and retain the stain so that nothing will remove it.

Supposing, now, that the sputum is thoroughly dry on the cover glass (and this can easily be seen by the white opaque appearance presented, all glistening portions having disappeared), the next step is to stain it in such a manner that the tubercle bacilli shall appear under the microscope as small brilliant red rods, while all other micro-organisms and pus corpuscles are stained blue, making a marked contrast. To do this the simplest, cleanest and most rapid method is that published by me in 1883 in the *London Lancet*. It is called the double stain as it, by one operation, stains the tubercle bacilli red, all other organisms and pus cells blue. A small quantity of this stain is poured into a watch glass, the spirit lamp is lighted (the spirit lamp was not included in the apparatus required as every practitioner has one for urinary analysis), a spread and dried cover glass is then taken up with the cover glass forceps and passed quickly three or four times through the flame of the spirit lamp to thoroughly complete the

drying and make the sputum adhere to the cover glass. It is then placed, *spread side downward*, on the stain in the watch glass. The watch glass is then taken up with the forceps and held in the flame of the spirit lamp for a moment and then removed. This is repeated until the stain begins to emit a white vapor. The watch glass is then set down for two or three minutes, and then the process is repeated.

Caution.—The watch glass must not be held in the flame of the spirit lamp for any length of time as it will generally split into two pieces. The stain will frequently catch fire. This is of no consequence as it can be blown out in a moment. It must then be left for about three minutes before re-heating.

The heating of the stain having been carried out as described the next process consists in washing out the superfluous stain and leaving the elements clean and clear so that they will be differentiated by their reaction to the staining agents. To do this the two glass capsules are filled two-thirds of their capacity with alcohol. The watch glass containing the cover glass in the stain is taken in the left hand and with the cover glass forceps in the right hand, the cover glass is pushed up the edge of the watch glass until it projects over it. It is then removed with the forceps and carefully washed in one of the glass capsules containing alcohol. A quick movement of the cover glass in the alcohol speedily removes the surplus stain and the blue colored sputum becomes visible. In washing these cover glasses the glass capsule should be placed on white blotting or filter paper; then by raising the cover glass out of the spirit and looking through it on to the white paper the state of the cover glass can be instantly ascertained. By this operation the spirit in the first capsule will be deeply colored, and as soon as the blue color on the cover glass shows fairly well in the spread sputum, it can be transferred to the other capsule containing clean spirit, and there washed thoroughly. This second washing must be continued for some time (two minutes or so) after the cover glass is apparently clean and the eye can see no more color coming away in the spirit.

The next thing is to dry the cover glasses. They are first drained on blotting paper on their edge and then laid down spread side uppermost and allowed to dry. This will not take long and it is better not to dry them by artificial heat. As soon as they are thoroughly dry take up one with the cover glass forceps and put a drop of the Canada balsam mounting fluid in the centre of the glass—on the sputum side. Then invert the cover glass and lower slowly onto the glass slide and press down gently.

The specimen is now ready for examination. I have given full time in the different operations, but the whole process can be done more quickly after a little practice. I have frequently demonstrated the presence of tubercle bacilli in sputum within three and one-half minutes from the time it was dried on the cover glass. All the apparatus and reagents can be obtained from Eberbach & Son, druggists, Ann Arbor, and those wishing to make their own stains, etc., can find the formula in my work on "Practical Pathology," published by Lea Brothers & Company, of Philadelphia, which is on sale at any of the Ann Arbor bookstores. The ingredients for the manufacture of the double stain should be procured from the above mentioned firm as they have been tested by me and are thoroughly reliable.

[TO BE CONTINUED.]

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, DECEMBER 7, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. EUGENE SMITH exhibited a patient from whose eyes he had removed soft cataracts three weeks ago, a perfect result in all respects, all congestion and sign of operation was gone, and she had two central round free movable pupils.

EXHIBITION OF SPECIMENS.

DR. DAVID INGLIS exhibited a brain removed from a patient who had died after a very peculiar sickness.

DR. T. A. MCGRAW exhibited two pathological specimens: (1) A large fibroid tumor removed from the upper end of the ovary. These tumors are rare, and are sometimes said to be primary, but they may be derived from uterine fibroid becoming attached to the ovary and afterward severing their connection with the uterus. (2) A tumor of the pylorus recently removed. DR. MCGRAW described the mode of operation and said the patient was doing well.

DR. J. H. CARSTENS exhibited the following five specimens: (1) Ovary which had been adherent in Douglas' cul-de-sac, giving rise to a great deal of pain at the menstrual periods—recovery. (2) A displaced and adherent ovary giving rise to dysmenorrhœa, nervous and reflex symptoms, all of which disappeared after removal of the ovary. (3) The patient from whom these tubes and ovaries were removed suffered with pain, high temperature, etc., for six months after a miscarriage which had resulted in retention of the membrane and septic infection of the tubes. Two weeks after the operation the patient was well and temperature gone. (4) Long continued ovarian inflammation in patient fifty-one years old resulting in ovarian tumor which had troubled her for a long time and lately has commenced to grow rapidly. It looks like a dermoid tumor on account of crescent layers in which it is developed, although there are no horns or teeth. (5) The patient from whom this specimen was removed had elevated temperature for some time prior to the operation and had had trouble referable to the ovarian region for years. At the operation a large malignant infiltrating tumor was found of the nature of an ovarian papilloma. It had so thoroughly involved the surrounding parts that it was impossible to remove it all, and although two quarts of pus were removed and the patient's temperature fell to 99°, she will finally succumb to the disease. DR. MCGRAW's case of ovarian fibroid is a rare and interesting specimen and his explanation of its production good.

DISCUSSION OF PAPERS.

DR. J. L. BRAY, of Chatham, Ontario, President of the Canadian Medical Association, read a paper entitled "Malaria." (See January issue).

DR. G. E. FROTHINGHAM: The paper has been a thoroughly instructive and scientific one, and it would be a pity to let it pass without thorough discussion.

None of us can discuss the theories which he advanced from personal observation, and numerous mooted questions are set forth. Many portions of the United States, such as the New England states, are supposed to be free from malaria, but in these localities during exceptionally dry summers when the marshes are thoroughly dried up malaria will show itself, and it will often remain latent in the system for a considerable time waiting for a favorable opportunity, such as a general losing of the vitality from overwork or fatigue, to show itself. Is the term typho-malarial fever a misnomer? I think all of us have seen cases which have presented the symptoms of both typhoid and malarial fever. Quinine in free doses will remove the former, but the fever will run the usual course of typhoid, but the bowels do not become loose. Typho-malarial, then, seems a good term for this fever because it presents symptoms of each and still is not distinctly either typhoid or malarial.

DR. T. A. MCGRAW: I do not consider the microscope of any very great value in diagnosticating these different kinds of fever.

DR. E. A. CHAPOTON: I agree with DR. BRAY in his statements as to the ætiology of malaria, but I must take exception to the theory of the causation of the different forms of the disease. My own idea is that it acts similarly to the exanthematous fevers, which for their propagation find a certain necessary element in the different organs which they severally affect, and when this something is exhausted the patient is free from the disease and will remain free until such time as that something is again reproduced. Some organisms reproduce the malaria quickly and they have attacks of fever every other day, others less quickly and their attacks come on at longer intervals. I like the term typho-malarial fever, but I do *not* think there is a bastard germ formed by the union of the typhoid and malarial micro-organisms. Each exists in the economy at the same time reproducing their own set of symptoms.

DR. W. R. CHITTICK: I would like to add my testimony in favor of the term typho-malarial. True typhoid is a different fever from this. I have seen typhoid in the east and north but rarely in Detroit. In typho-malarial fever we have chills, lower temperature, less mortality and no diarrhœa. In winter we have malaria because with our present mode of living and keeping our houses so warm the germ gets enough heat to grow and propagate all winter.

DR. G. W. STONER: I think there is a true typhoid fever found in Detroit because I have seen it both in and out of hospital practice. The point that DR. BRAY makes in his paper relative to the elimination of the malarial influence in seven or ten days is a good one, because two or three or four days of vigorous dosing with quinine is often not enough to thoroughly eliminate the poison of malaria. The term typho-malarial is a convenient one, and the two germs acting upon the system at the same time produce a fever partaking somewhat of the nature of each and different from either.

DR. F. L. NEWMAN: DR. G. W. STONER saw ten families with me where there were eleven cases of true typhoid fever of a very typical variety. The infection could be traced to a well of impure water which these families had been using. Moreover, these families were milk peddlers and many cases of typhoid developed in the families who received their milk from them.

DR. J. L. BRAY, in closing the discussion, said: I must disagree with those who claim there is a typho-malarial fever. There may be the two poisons in the

blood at the same time but they do not unite to form a third fever distinct from the other two. Quinine will always eliminate the malarial element. That typhoid is different here than elsewhere may be only a coincidence. We may have either diarrhœa or constipation, and for the relief of the latter I now use only enemata. Many cases will present only some of the typhoid symptoms, but they are typhoid nevertheless, and it would be better to try to diagnose the case rather than to shove it off onto such a term as typho-malarial fever. There are many obscure cases which are of a malarial origin although no distinctly malarial symptoms may present themselves. These cases can be easily diagnosed by a microscopical examination of the blood and cured by quinine.

DR. W. R. CHITTICK: I did not mean that there absolutely was no typhoid in Detroit, but that I had not seen any. Of course if the germ be introduced into the organism typhoid fever will develop irrespective of the locality in which the individual lives.

DR. EUGENE SMITH read a paper entitled "Cataract." (See page 49).

DR. G. E. FROTHINGHAM: I must most sincerely compliment DR. EUGENE SMITH upon the successful case of cataract extraction which he has presented to us to-night; it is, indeed, a perfect result. The question of simple extraction of cataract *versus* extraction with iridectomy is one of great importance to all ophthalmologists, and there seems no doubt that the simple operation is the ideal one of the many which have been brought forward at various times, when it is a perfect operation and everything goes smoothly, but unfortunately it does not always turn out as one would desire. There seems no doubt but the simple extraction is beset with many complications and they are more likely to occur and seriously jeopardize our final good results than when iridectomy is done. The most important of these complications are prolapse of the iris, iritis, loss of vitreus and secondary cataract. My first operations were made without iridectomy by the flap operation, which is essentially the same as the so-called simple extraction of to-day, and especially as performed by DR. SCHWEIGGER, who was one of the first and is still one of the greatest advocates of this method of operating. In 1874 I published, in the "Transactions of the Michigan State Medical Society," a description of an operation I had devised, and which is the same as the simple extraction of to-day as made with the narrow knife and upward incision. I made great claims for this operation, among them ease of execution, and perfect results. More extensive experience convinced me that I was in error. The operation is often difficult to perform, and I had to make an iridectomy quite frequently in order to evacuate the lens without exercising undue pressure or prolonging the operation. I find that this is also the experience of those who make the operation now. They have to resort to iridectomy sometimes even when they have invited others to be present to witness a simple extraction. The greatest objection to simple extraction is the greater frequency of secondary cataracts, and the occurrence of prolapse of the iris in the course of the after-treatment. SCHWEIGGER, in his first report, stated that fifty per cent. of his cases recovered with posterior synechia. In his last report of four hundred and fifty cases compiled by his assistant, he shows twenty cases lost, eighty-four cases of secondary cataract, and only three hundred and forty-six cases of success. The secondary cataracts that form after simple extraction are commonly more difficult to relieve than those that form after an extraction with iridectomy.

So it is safe to consider a large per cent. of these cases as lost. Thus his successes in four hundred and fifty operations which is reported as seventy-six and five-tenths per cent. cannot be materially *raised*. This is certainly not as high as the average after GRAEFE's extraction. The accident which I found most formidable, and which decided me to abandon it, is prolapse of the iris. This cannot be guarded against materially by any device. In his first ten cases SCHWEIGGER had one of complete prolapse through the entire extent of the wound. This was ten per cent., and he expressed the hope that future experience would enable him to avoid this accident. In his last report of four hundred and fifty cases, however, he reports thirty-five cases of prolapse, equal to seven and nine-tenths per cent. In five hundred and nine cases operated upon by this method by DR. H. KNAPP, and lately reported by him, there were forty-two cases of prolapse of the iris during after-treatment. This is equal to eight and four-tenths per cent. This shows no material lessening of this danger, even in the hands of the most experienced operators. I need not dwell upon the gravity of this complication, one of the most annoying and dangerous of any we meet with,—one that necessitates a second operation within one or two days after the extraction, or at a period of ten or more days after. The period between the third and tenth days DR. KNAPP declares to be attended with increased risk. This accident alone, which is completely guarded against by a large iridectomy made at the time of operation, is sufficient to deter me from resorting to the simple operation until some means have been found to prevent it, and there is no prospect of this. Beside all this, the percentage of good results by this operation as reported, is not as great as I have had by GRAEFE's operation. I cannot, therefore, fully agree with DR. SMITH in his enthusiastic advocacy of the simple extraction. While I admit that some cases are perfectly ideal in their results, I would, much rather, take for my motto "sufficient sight for the many" than "perfect sight for the few." Everything considered, then, statistics, experience, and results, I would still hesitate to fully accept the teachings of those who advocate the general adoption of the so-called simple operation.

DR. R. W. GILLMAN: Many of the foremost men in Europe and America do the simple operation. DR. SMITH's forceps do away with many of the difficulties in the way of the simple operation. It seems the ideal and best way and secures the best results.

DR. L. E. MAIRE: There are two objects to be kept in view in cataract operations: (1) To get the best possible vision for the patient; (2) To do nothing that materially interferes with the healing process. It seems to me that the operation with iridectomy gives us the best chance of attaining both these ends. I have had one case of prolapse of the iris which occurred fourteen days after operation.

DR. DON. M. CAMPBELL: I advocate and practice extraction with iridectomy because I consider it the safer operation.

DR. EUGENE SMITH: Asepsis and cocaine have done a great deal for us in attaining the beautiful results we do in the simple extraction. Suppuration is no more frequent after the simple extraction, and iritis not so frequent as by the old method, nor is prolapse of the iris. The cut edges of the iris are more like absorbed septic material than if the iris is not cut at all. The iris is very tolerant of manipulation as was shown in the case before you to-night. In this

case the iris prolapsed three times and was as many times replaced and still iritis supervened. I have prolapse of vitreus by simple method, and since I have used my own forceps no secondary cataracts have occurred. As a dressing I use simply a strip of adhesive plaster from forehead to cheek.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, DECEMBER 14, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS.

DR. WALKER: Three specimens of stone removed from the bladder by crushing and evacuation according to the method introduced by DR. BIGELOW. (1) Man thirty-five years old, who has had bladder symptoms for many years. On the 3d of June I operated, crushing and evacuating a large phosphatic stone—recovery. (2) Girl sixteen years old, who has been treated four years. DR. HASTIE finally diagnosed stone. Removed by crushing and evacuation; a large oxalate of limestone—recovery. (3) Had symptoms for six or eight months. Removed stone by crushing and evacuation—recovery. I saw this case in consultation with DR. WILSON, of Antoine street. The different operations for stone have been written up from all stand-points. The older surgeons like the cutting operation, either lateral or medio-lateral. The latter is fairly safe. Evacuation by crushing was first mentioned some time in the "thirties," and it was then done by repeated crushings for they would not operate for more than three or five minutes at a time, but in 1878 DR. BIGELOW devised an instrument which has removed all the chief objections to this operation, which are: (1) Injuring the bladder walls; (2) Water may be thrown in the ureters, but if the operator is careful all these dangers may be easily avoided. All ages can be operated on and many cases go about their business in a few days if not complicated.

DR. LONGYEAR exhibited a pathological specimen removed from a patient to-day. First trouble two years ago accompanied by great sickness. Has had proper treatment for five or six days. Great adhesion of all the uterine appendages. The ovaries were cystic. They were difficult to remove, especially the right.

DR. D. L. PARKER: Does DR. WALKER have any difficulty in telling if any of the stone is left?

DR. WALKER: No. In only one case have I had to do a second operation. There is a certain sensation which you get when there are any fragments left and if you do not get that you know that all is evacuated.

DISCUSSION OF PAPERS.

DR. BONNING read a paper entitled "Treatment of Scarlet Fever." (See page 51).

DR. SHERMAN: I have had a great many cases. I have used salicylic acid. I do not think that any very practical results have been obtained from any treatment. Under antipyrine two years ago I had thirty-eight cases of successive recoveries and thought I had found a specific but in two weeks after I had five deaths and do not think that antipyrine is much use. Locally for a wash for the

nose and throat I use bichloride of mercury or hydrogen peroxide with good results. Especially the latter in fifty per cent. solution. To reduce the temperature and quiet a patient antipyrine is good. I feel gratified at the treatment that DR. BONNING has set forward and I will follow it up.

DR. PARKER: The subject is one that is of interest to all of us. Fifty-one cases of recovery is a good record but it does not necessarily mean anything because the next fifty-one cases may not be so very good, but it shows that the line of treatment laid down is worthy of trial. Belladonna is said to be a good prophylactic. The hygienic treatment is very important and it will also prevent many complications and that is why cases which are not properly attended to develop many of the complications of this disease. Patients should be guarded against cold as there is a close relation between the functions of the skin and the kidneys. I will try the Doctor's plan of treatment. My own line of treatment has been a mixture of quinine, gray powder and Dover's powder, but will vary according as complications arise and also in the different forms of the disease. From this line of treatment I have had good results. The mouth, nose and throat should be kept clean. Boracic acid and listerine are good local washes. In dropsy jaborandi, alcohol, baths, sweating and steaming, with cathartics are indicated. The results of the salicylic acid treatment promise a good deal.

DR. C. G. JENNINGS: There are a great many points of resemblance between scarlet fever and rheumatism which may give a clue to the good results obtained in this treatment. I have not much confidence in this or any other specific and would hesitate to accept it as such. The salicylic acid treatment was described and condemned at the last meeting of the American Pediatric Association because it depressed the circulation. I have used it when fever has been complicated with rheumatism and in such cases I have noticed no specific effect. I consider bathing the patient the best part of the treatment outlined. Thorough antiseptic treatment of the nose and throat is very important because it is an absorption of septic material from these cavities that gives rise to complications of scarlet fever.

DR. J. H. CARTSENS: I have never lost a case of scarlet fever and do not consider it a dangerous disease. I put my cases thoroughly under the influence of quinine and get the full systemic effect of the drug, attend to the hygienic surroundings and give plenty of hot drinks and get a rash well out. I have never washed out the nose and throat at all in any of these cases. I firmly believe that quinine is a specific if a patient is thoroughly brought under its influence early. Very few complications are found if quinine is thoroughly and early given and the hygienic surroundings of the patient attended to. In many cases I think it would be better to allow a family to have the disease all together and get it all over with and not lose so much time in having part of the children have the disease at one time and others taken down with it at other times. I sometimes see complications of this disease in consultation but it is usually in cases which have not been properly treated.

DR. LONGYEAR: These different kinds of treatment point to a systemic antiseptic being a proper medicine. Quinine and salicylic acid are both such, and I use benzoate of soda and by bringing the system thoroughly under its antiseptic action good results have been found in my practice.

DR. LOCKHARDT: The salicylate of soda treatment has been condemned as likely to produce nephritis.

DR. SHERRILL: I have never had any experience with salicylic acid treatment. I think bathing the most important part of the treatment and in connection with it would use inunctions of cocoa butter.

DR. WINTER: Does salicylic acid reduce the pulse?

DR. BONNING: No.

DR. WINTER: I would like to know on what theory it does act if it does not act by lowering the pulse and by being a general systemic sedative. I lost two cases (men) who were great tobacco consumers and who had large dilated hearts and it was from this cause that the patients died.

DR. WILSON: If it prevents sequelæ I would try it. Lately I saw a family who were very healthy. For some months I lost sight of them and upon seeing them again I found all the children total wrecks. They had passed through an epidemic of scarlet fever which had left them in this condition. I therefore consider the disease a serious one.

DR. JENNINGS: I have treated cases with large doses of quinine which have died and I have no faith in any specific—quinine, salicylic acid or benzoate of soda.

DR. FLINTERMANN: Fifty-one cases of recovery is a good record but it is not conclusive. Sydenham says scarlet fever is not a serious disease but others are of the opposite opinion. Mortality ranges from fifteen per cent. to forty per cent. There is no specific treatment of scarlet fever. I think the baths are very important, more so than the treatment, and the chief treatment is symptomatic. Many of the very severe complications which follow scarlet fever show it to be a very dangerous disease and in many cases all treatment is of no avail. Lately epidemics of this disease have been mild. The next one may be severe.

DR. BONNING: I do not look upon scarlet fever as a light disease. Baths I consider very important. Baths are better than antipyrine for lowering the temperature. My object in bringing this before the society was to have the members give it a trial. DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, DECEMBER 21, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

DR. GEORGE DUFFIELD read a paper entitled "Hæmoptysis: Its Pathology and Treatment." (See page 53).

DR. H. J. HARTZ: The cases reported are typical cases of tuberculosis. Most of these cases must have been exposed to the tubercle bacillus which causes ulceration and produces erosion and opening of a vessel. If the capillary region be affected hæmorrhage will come quickly. The germ may be latent in the system and if the patient be depressed then the tissues break down and other germs will find their way into them and we have a process of septicæmia. Capillary hæmorrhage is not so important as arterial. Sympathetic hæmorrhage I have never heard of but I think that mental causes are sometimes at the

bottom of it and in its treatment we must give our patient great assurance. We do not always have tuberculosis where we have hæmorrhage. For instance, in bronchitis, a full-blooded subject who is exerting himself vigorously may have a venous hæmorrhage from the thyroid gland caused by tumor as related by DR. SHURLY. Specific erosions may cause hæmorrhage. Ulceration on the vocal cords or over-exertion at singing may cause hæmorrhage. In the clinic at Saint Mary's Hospital there is a boy who is bleeding from his trachea every week or two. Possibly a tumor may be growing. Lung therapy is in a chaotic state and requires considerable experience for its elucidation. Morphine should be given in large doses and the patient, if possible, sent to a suitable climate. Good systematic gymnastic exercise should be enjoined and the patient taught to breathe properly.

DR. J. FLINTERMAN: Hæmoptysis is mostly caused by tuberculosis and any hæmoptysis will point to a patient who is or will become tuberculous. Syphilis and nervous causes will sometimes produce hæmoptysis. Brown-Sequard has produced hæmoptysis from wounding certain regions of the brain. Examination of the sputa is very important in these cases because physical examinations alone will often not be sufficient to make our diagnosis, and it is made sure by microscopic examination and it should not be left out any more. Hæmoptysis is an affection which is trying on our resources and sometimes the blood lost is enormous. *Treatment:* Hypodermic injection of morphine is the best and a very large dose must be given. Enough must be given to keep the circulation and the patient very quiet. I would be afraid to give digitalis because it makes the heart very energetic though quieter and may remove the clot. I have had no experience with ergot by hypodermic injection and would hesitate to use it. Local application of ice-bags often fail, and some recommend hot applications on the chest walls, and when all other remedies fail for eight weeks in a case of relapsing hæmoptysis hot applications work a cure. High altitude causes a change in the capillary circulation of the periphery and this produces a good effect on the hæmoptysis. Blood tumors of the vocal cords will sometimes cause hæmoptysis. Bleeding from the trachea and vocal cords is not so bad in its prognosis. If tuberculosis can be excluded the prognosis in hæmoptysis will be good.

DR. A. W. IMRIE: The fact that, after the brilliant promises held out to the profession in the treatment of lung disease, we are going back to our old treatment is very discouraging. The subject of climate is very important and should be thoroughly considered and the patient sent to a locality which will work some benefit. Every case should be studied very carefully and sent to an appropiate climate. Hæmoptysis does not do well in a high altitude. They should be sent to a dry and equal climate such as Arizona. Catarrhal symptoms with hæmorrhage are most benefited by high altitudes.

DR. J. L. IRWIN: Digitalis seems indicated on account of contracting the arterioles. Ergot must be thoroughly antiseptic and those other remedies which are used to keep it pure may be contra-indicated in hæmoptysis. If we could get it perfectly fresh it would be well.

DR. DUFFIELD: DR. HARTZ thinks that these cases were due to tuberculosis, but two of them, and possibly three, were certainly not. One was sympathetic and the other traumatic. I do not believe in cold applications. Arizona is a

good place to send these patients to, Phœnix being a place, in the southwest. Many cases improve in the hospitals under hypodermic injections of ergot and other remedies. I have not found any good results from hypophosphites.

REPORTS OF CASES.

DR. H. J. HARTZ: (1) Lady, seventy-eight years old, suffering from bronchopneumonia. She has had no fever for some days. I have been giving her champagne, caffeine and benzoic acid. (2) Young man who had a fall a year ago and now presents a complete dullness over the left lung; occasional hæmorrhage; in great pain.

DR. FLINTERMAN reported lady, fifty-seven years of age, who had had a stroke of apoplexy with paralysis of left side which had recovered in three or four days. The stroke had been preceded by intense headache and vision is now failing. She is probably suffering from some grave disease of the brain or kidneys.

DR. CARRIER reported an interesting case of vesicular skin disease of the fingers accompanied by no itching, no pain, and no smarting. The fingers were stiff and infiltrated. The patient made a rapid recovery under arsenic.

DR. METCALF reported case of scarlet fever which ended fatally.

DR. COLLINS reported an interesting case of placenta prævia. The placenta was attached centrally all the way around the os uteri. Patient recovered nicely although the hæmorrhage was great. The child was born alive but finally died.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE INFLUENZA.

THE recrudescence of the influenza, though it be in but a mild form, has accentuated the unfortunate meagreness of our store of knowledge of this disorder, and the deplorable paucity of our resources for controlling its insiduous epidemic tendencies. Our ignorance as to the cause of the malady is nothing short of a universal calamity, being actually more disastrous than our failure to discover remedies for its effects. We feel a creditable pride in the assurance that small-pox, typhoid, and scarlet fever have been brought within range of practical preventive measures. There is, however, no more helpless science than preventive medicine when its operations lack the justifications of accurate knowledge, and for this reason its efforts in relation to influenza have been uniformly discouraging.

The discovery of a bacillus is an interesting and important fact. What influence it may exert upon preventive medicine is uncertain. The mere discovery of its presence in the organism affords no explanation of how it got there, nor does it suggest any method whereby we can get it out. If we estimate its bearing on future therapeutics, by former and similar indications based on microbic pathology, it will simply lead, as in the case of tuberculosis, to the somewhat pretentious exhibition of remedies, hypodermically and otherwise, all

having a bactericidal intent for their proximate purpose. The study of the life-history of the bacillus may eventuate in the discovery of its origin, which would be distinctly serviceable to science. Were the observation of it to confirm or annul our belief in the infectiousness of influenza, it would do something toward settling our opinions as to whether isolation be a wise or needful sanitary regulation.

Influenza has now re-appeared three times within a short period of time. Why it comes is unknown, and why it begins is as unintelligible as why it ends. That it is a dangerous disease is indisputable. That it has a distinct malignity toward the aged is unfortunately well-proved. That those whom it attacks, if they be over the age of sixty, are likely to die with pneumonic complications, is sadly certain. Yet we can suggest no avenue of escape. We cannot even assure those who may not have been stricken that there is comparative immunity in temperate living, in hygienic surroundings, or in faultless plumbing, for the heir to a throne, living habitually encompassed with all the advantages that science and art can suggest, seems just as liable to succumb to the malady, as the humblest citizen in the most unsanitary dwelling.

EDITORIAL BREVITIES.

THE RAILROAD IN SURGERY.

THE railroad is a better field of experience for the surgeon than the battle-field. In 1890 twenty-five thousand men were killed and injured in the railroad service of the United States. This is a greater slaughter than occurred at Sedan or Gravelotte or Gettysburg. Statistics show that for the year ending June 30, 1889, among all railway employes there was one death in every three hundred and thirty-seven and one injury for every thirty-five, whilst among trainmen alone, there was one death for every one hundred and seventeen and one injury for every twelve. This mortality is more than double what it is in England. There seems to be imminent need of some reform in car-couplers. The old pin and link contrivance is responsible for much, and has made more cripples than the bloodiest of wars.

MEDICAL HOSPITALITY DURING THE WORLD'S FAIR.

A CONJOINED meeting of representatives of the various medical societies of Chicago was held a short time ago for the purpose of organizing some scheme for the entertainment of the medical profession during the world's fair. The opinion was common that the Chicago profession should extend general courtesies to the visiting physicians, and in some instances furnish special hospitality to members of the medical fraternity. The profession will doubtless hail with satisfaction this early expression of cordiality by the Chicago profession, and will be willing to leave themselves in the hands of such hospitably-minded hosts.

THE PHYSICAL DETECTION OF CRIMINALS.

IN the *New Englander and Yale Review*, Mr. A. McDonald discusses the question of criminology as a department of sociology. Among the characteristics which he enumerates as frequent in criminals are the following: (1) a frequent persistence of the frontal median suture; (2) a partial effacement of the parietal

or parieto-occipital sutures; (3) a frequency of the wormian bones in the regions of the median and lateral posterior fontanelles; (4) the development of the superciliary ridges, with the defacement, or even frequent depression, of the intermediary protuberance. Among other peculiarities are mentioned left-handedness, feeble muscular tone, a tendency to alcoholic and epileptic degenerations. A microcephalic head, asymetry of the orbits, division of the iris, duplication of the skin in the corner of the eyes, are regarded as less frequent characteristics of criminal tendency.

A DANGEROUS REMEDY.

THE *Western Druggist* has reported a case of death from misadventure which occurred in Bay City. A physician of that city wrote a prescription for "hydrargyrum lactatum." He desired to prescribe a proprietary article called lactated mercury, which is a combination of mercury and bismuth. The druggist to whom the prescription went ordered his wholesaler to send him some lactate of mercury, and in response received a supply of Merck's hydrargyri lactas or mercurous lactate. This was administered and the patient died. The case illustrates the folly of prescribing proprietary remedies of doubtful nomenclature and composition.

THE REMEDIES FOR MORBID FEARS.

THERE is a curious article in the December number of the *North American Journal of Homœopathy* on the treatment of morbid fears. It is as good as a piece of fifteenth century medical writing. The writer describes several well-known forms of agoraphobia, and other imperative conceptions, but the treatmen of these indefinite psychological states has been brought down to exquisite exactness. For fear of being alone give: *ars.*, *calc.*, *camp.*, *con.*, *dros.*, *elaps.*, *R.*, *sep.*, *stram.*, etc. For fear of being in the dark give: *acon.*, *bapt.*, *calc.*, *lyc.*, *puls.*, *stram.*, *valer.* For fear of society give: *hell.*, etc. For fear of death give: *arg.*, *n.*, *ars.* The writer gives no treatment for fear of the doctor. The boy who, walking in the woods, was afraid that "he almost saw a snake," could be treated very successfully by the methods recommended by our homœopathic friends.

MEDICAL NEWS.

CHOLERA is prevalent in China.

BUFFALO has a lady undertaker.

DR. J. M. SMITH, of London, Ontario, is dead.

THE *Annals of Surgery* will hereafter be published in Philadelphia.

A TENDER-HEARTED mother gave her son chloroform before she whipped him.

NEW YORK will have a new up-town hospital to be opened on Fordham Heights.

MATRIMONY IN ENGLAND.—There is a marked decline in the marriage-rate in England.

DR. LYMAN HALL, one of the organizers of the Society of Surviving Surgeon of the Civil War, died at Champaign, Illinois, recently, aged seventy-four years.

THE University of Toronto is about to inaugurate a post-graduate course in medicine.

THE INFLUENZA BACILLUS has been discovered by Dr. A. Pfeiffer, a son-in-law of Dr. Koch.

ALGER COUNTY is said not to have had a physician residing in it since it became such.

THERE are nine hundred and eighty-six students studying medicine at the University of Dorpat.

THE *Hot Springs* (Arkansas) *Medical Journal* is the name of a new candidate for professional favor.

DR. WALTER WYMAN has been confirmed as Surgeon-General of the United States Marine Service.

GRATUITOUS medical services are annually dispensed to over half a million people in New York City.

DR. FRANKLIN M. DUMAS has been appointed a city physician of Detroit, *vice* Dr. Erwin Wright, resigned.

DR. H. B. BAKER says that a small city should pay its health officer two thousand dollars per annum.

PROVIDENCE, RHODE ISLAND, complains of the pollution of its drinking water by the valley villages along the river.

A MEDICAL student was recently fined one hundred dollars in Chicago for practicing medicine without a license.

A SANITARY CONVENTION under the auspices of the State Board of Health will be held at Holland, March 3 and 4.

FRANCE is still menaced with depopulation. Thirty-eight thousand more deaths than births were reported during 1890.

A SECRETARY OF PUBLIC HEALTH.—The American Medical Association is agitating the appointment of a cabinet officer.

EVERY case of typhoid fever is a case of water-poisoning, says an exchange. This is a good thing for the public to bear in mind.

A CONGRESS TO STUDY PROSTITUTION. — An international congress for the study of this subject will be convened in Paris in 1893.

DR. C. G. COMEGYS, of Cincinnati, is in Washington laboring for the passage of the bill to establish a Department of Public Health.

DR. GRAVES, the hero of the poisoning episode in Colorado, has been reprieved, while the supreme court reviews his case and sentence.

DR. HOWARD MCCULLOUGH recently died of chronic Bright's disease, at Fort Wayne, Indiana. He occupied the chair of physiology in the Fort Wayne Medical College.

A SUCCESSFUL PORRO'S OPERATION.—A successful Cæsarean section by the Porro method was recently made by Dr. J. H. Carstens. Mother and child at last accounts were both exemplifying the beneficence of abdominal surgery.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The association will meet this year in Mexico under the presidency of Dr. Felix Formento.

PROFESSOR BOHN, director of the Vienna General Hospital, has had a patent of nobility conferred on him by the Emperor of Austria.

PHYSICIANS have shown their estimate of the value of life by contributing the highest percentage of suicides during the past ten years.

MARY J. SAFFORD, a prominent physician of Boston, the first woman in the United States to administer relief on the field of battle, is dead.

ROOSEVELT HOSPITAL, of New York, has received an endowment of five thousand dollars from Mrs. Mariah E. Hotchkiss, lately deceased.

DR. THOMAS COLLINS, of Yale, died on February 7, of pneumonia. He was seventy years of age, and is survived by a widow and several children.

DR. J. B. HULL, of Lansing, read a paper before the State Superintendents of the poor at their convention held at Grand Rapids, February 23 and 24.

DR. NICHOLAS SENN has been invited to address the British Medical Association, at its next meeting, on intestinal obstruction and intestinal anastomosis.

A CASE of violent insanity is reported to have resulted from the Keeley treatment, the subject being Dr. James M. Miller, of Bloomington, Illinois.

BY recent legal enactment the police of Saint Petersburg are made responsible for the fee when a physician is called to attend accident cases in the streets.

A SANITARY EXHIBIT will be made at the Columbian exhibition. Conjoined effort of various state and local boards of health will be directed to this end.

BOUCHOT, the originator of intubation of the larynx, is dead. His essay, "*Du traitment du croup par le tubage du larynx*," is likely to make him famous.

THE Pan-American Medical Congress has created a section on medical pedagogics, the chairman of which is Dr. D. B. St. John Roosa, of New York City.

THE late Dr. Buckminster Brown, of Boston, has bequeathed forty thousand dollars to Harvard University for the foundation of a professorship of orthopædic surgery.

SIR GEORGE PAGET, M. D., eighty-three years of age, died in London, January 29. He received the title of knight in recognition of his medical and scientific attainments.

MENSTRUATION AND THE LARYNX.—Dr. von Klein says that it is possible to tell when a female singer is menstruating by the fact that her voice is lower in tone than usual.

WASHINGTON CITY seems to have a fair percentage of physicians for its population. There are four hundred and forty-four regulars, thirty-six homœopaths, and two eclectics.

DR. ROBERT P. BUSH was elected speaker of the New York State Assembly on January 5. He was chosen by the unanimous vote of his party, and is the first physician to hold this high office. He is about fifty years of age, and a graduate of the medical department of the University of Buffalo, class of 1874.

DR. MARY P. JACOBI, of New York, and Dr. Mary Woolsey Hoxon, of Washington, are each said to earn over forty thousand dollars a year in the practice of their profession.

TYPHUS FEVER has appeared among Russian immigrants in New York City. A large number of cases have been discovered in lodging houses of the United Hebrew Charities.

OVERLYING OF CHILDREN.—There are over eight hundred deaths a year in London, from mothers lying on their children. Drunkenness figures largely among the causes.

THE SWAIN HOME FOR NURSES. — Mrs. Eleanor J. Swain, of Detroit, has donated twenty thousand dollars to Harper Hospital for the purpose of erecting a home for its nurses.

THE PRESIDENT, in his annual message to congress, alludes to that fertile cause of injury, the car-coupler. He recommends the compulsory introduction of automatic couplers.

DR. W. J. P. KINGSLEY, of Rome, New York, is the inventor of a hypodermic needle that will not clog. It has a conical channel, the small opening being attached to the syringe.

A CHANCE FOR PRIZE WINNERS.—The Paris Society of Medicine offers a purse of fifteen hundred francs and a gold medal for the best essay on tuberculosis, to appear before the end of 1892.

CHILD CRYING IN UTERO.—A writer in the *Medical World* was called upon to correct a presentation, and was much surprised to hear through the imperfectly dilated os, the stifled cry of the baby.

DR. J. C. SHAPARD, of Winchester, Tennessee, died of heart failure, aged sixty-eight years. He was a highly educated physician, and as a medical writer enjoyed a reputation beyond the state.

THE eleventh congress for internal medicine will be held in Leipsic, Germany, April 20, 21, 22, and 23, under the presidency of Professor Curschmann. The programme announces some important papers.

RUSH MEDICAL COLLEGE is to have a pathologist, the salary of whom will be five thousand dollars per annum. The selection will be made by a committee consisting of Virchow, Koch, and Metschnikoff.

THE MICHIGAN STATE MEDICAL SOCIETY will hold its annual meeting in Flint, May 5 and 6. Members are urged to prepare their papers and communicate their titles to the secretaries of the sections.

DR. ZEOVIA OWEN-MCDADE, of Kenyon, Minnesota, recently died of pneumonia. The doctor graduated from the University of Michigan, class of 1888, and later married a classmate, Dr. C. W. McDade.

THE Ohio State Board of Health has prepared two bills regarding sanitary legislation which are to be introduced in the legislature of that commonwealth. One of the bills provides for the protection of health in the rural districts by making township trustees boards of health. The other bill requires additional regulations in the transportation of dead bodies that contagion may be prevented.

DR. JOHN MCDONALD, of Dublin, Ireland, aged ninety-six years, died recently at his residence in Fitzwilliam Square. In 1847 he was elected to the chair of surgery in the Royal College of Surgeons of Ireland.

DR. W. H. LONG, of the Marine Hospital Service, well-known in Detroit during his residence in this city, died January 5, in Cincinnati. The doctor was much respected and leaves many sincere friends in the profession.

THE removal of a lipoma weighing over twenty-four pounds was recently reported to the Berlin Medical Society. Its development was continuous from the shoulder to the elbow, the free portion hanging as low as the hand.

DR. C. E. SHEPPARD, of London, England, recently committed suicide because a death resulted from his administration of chloroform. He was a skillful physician, but was morbidly conscientious and sensitive, and had suffered from a mild attack of melancholia in earlier life.

THIS issue of The Physician and Surgeon contains the first of a series of papers on "Practical Pathology for Busy Practitioners," from the pen of Professor Heneage Gibbes, M. D., of the University of Michigan, whose writings on this subject are always read by the profession with pleasure.

THE POWER OF ADVERTISING, says the *Medical Review*, was recently demonstrated in a practical manner to a Philadelphia man who is enthusiastic over the subject. The day after he had inserted in a paper a notice saying that he wanted a boy, his wife presented him with two—twins.

DURING the week ending February 5, the Illinois State Board of Health issued certificates entitling twenty-one physicians and two midwives to practice in that state, and revoked one issued in 1877 because of unprofessional conduct, the holder having been convicted of criminal practice.

DR. W. W. REEVES, superintendent of the state asylum for the insane at Austin, Texas, was shot and killed by an insane patient. He was a native of Virginia, a graduate of the College of Physicians and Surgeons, of Baltimore, and vice-president of the Texas State Medical Association.

JOURNALISTIC CHANGES.—Dr. Brooks H. Wells will hereafter edit the *American Journal of Obstetrics*, in place of Dr. Munde, who has so long and successfully conducted this journal. Dr. John A. Fordyce succeeds Dr. Morrow in the editorship of the *Journal of Cutaneous and Genito-Urinary Diseases*.

THE ANNALS OF OPHTHALMOLOGY AND OTOLOGY.—This is the newest quarterly candidate for medical patronage. It is edited by Dr. James P. Parker, of Kansas City. The originality of the journal is not so manifest on the cover as in the contents. The former seems to be an attempt at an exact imitation of an older journal.

A BODY-SNATCHER.—You have to go away from home to learn the news. A New York journal tells us: "A Canadian medical student recently smuggled a skeleton into Canada from Detroit by dressing it up, properly padded, in woman's clothes, putting on it a hat and a thick blue veil, and seating it alongside of him in a buggy while crossing the ferry. After he had got it by the customs officers and into his own house, he learned that there was no duty on skeletons. His opinion of his own cleverness has fallen a degree or two."

MAJOR A. J. WOODHULL, Surgeon United States Army, has been assigned permanent charge of the United States Army and Navy Hospital at Hot Springs, Arkansas, *vice* Major R. S. Vickery, removed to Fortress Monroe.

QUININE cost twenty dollars an ounce in 1823, and it now costs from eighteen to twenty-four cents. The cheapness of this drug is said to be making us quinine-habitues. Quinine will soon be as indispensable as tobacco.

EDITORIAL CHANGES.—Drs. Nicolson and Stockton have retired from the editorial staff of the *Southern Medical Record*, their places being filled by Drs. Gaston and Westmoreland. *The Therapeutic Gazette* has again changed editors, being now in the hands of Drs. Hare, de Schweintz, and Martin.

SULPHONAL.—The following method will, it is said, increase the speediness of the action of sulphonal: Dissolve the sulphonal in three-quarters of a cup of hot water, add cold water until the temperature of the water allows it to be drunk, when it may be administered. Its action sets in immediately and causes no disturbance.

PHYSIOLOGICAL PSYCHOLOGY.—A laboratory of physiological psychology has been opened in the Sorbonne at Paris. Persons wishing to make original investigations or to acquaint themselves with the methods of research at present in use in the domain of physiological psychology, should apply to the director, Dr. A. Binet.

AT THE WORLD'S FAIR there are to be two special hospitals. One of these is to be under the direction of Dr. Owen, and is to be the official hospital of the exhibition; the other is to be a model hospital in the woman's building. In connection with this model hospital will be the department of public comfort, where couches and beds will be provided for such cases of accident or indisposition as do not need serious medical attention.

A HOSPITAL FOR EPILEPTICS.—The Governor of Massachusetts has sent a message to the legislature recommending a state institution for adult epileptics, the following being the conclusion thereof: "In my judgment the facts and reasons stated in the communication entitle the recommendation to your early and favorable action. I specially commend the suggestion that the institution, if established, should be in the form of cottage hospitals."

A CORRECTION.—We erroneously credited Dr. Harriet A. Gerry in our last issue with being the first physician of her sex to perform a laparotomy in Michigan. Dr. Florence Huson, of Detroit, is the lady who should have been so named. The case referred to was one of ectopic gestation, and to Dr. Huson is due, not only the credit of making the diagnosis in an obscure and difficult case, but also for the skillful and successful operation which followed.

THE seventh annual report of the New York Post-Graduate Hospital shows that eight hundred and forty-two house-patients and thirteen thousand and seven out-patients have been treated during the year. The thirteen thousand and seven out-patients made forty-three thousand seven hundred and ninety-one visits to the hospital. These figures speak for themselves as to the value of the school for purposes of clinical instructions. The babies wards are a feature of the establishment.

DR. CHARLES P. PENGRA, of Boston, Massachusetts, formerly of Ovid and Ann Arbor, Michigan, died at Boston, January 31. The doctor received his degree at the University of Michigan in 1880, in which school he occupied the position of assistant in chemical physiology for several years, afterward being called to the chair of materia medica and botany in the Massachusetts College of Pharmacy, and of microscopy in the Boston Dental College. These positions he held at the time of his death.

ILLEGAL PRACTICE OF MEDICINE.—One of our French exchanges tells us of a Prussian shoemaker who announced in public print that he had a sure cure for corns. He was prosecuted for the illegal practice of medicine. The judicial tribunal before whom he appeared asked him to produce his cure. He took out of his bag a number of shoe-soles, so made that they permitted no pressure on the corn. The physician, the pharmacist, and even the orthopædist could not object, so the man was acquitted.

SIR MORELL MACKENZIE died in London, February 3, from syncope, resulting from an attack of influenza. He was born at Leytonstone, Essex, in 1837, and received his medical education at London, Paris, and Vienna. Founded the hospital for the treatment of diseases of the throat in London in 1863, and obtained the Jacksonian prize from the Royal College of Surgeons for his essay on diseases of the larynx, in the same year. Successively filled the positions of assistant physician, full physician, and lecturer on diseases of the throat, in the London Hospital, holding the latter appointment at the time of his death. In 1888, Queen Victoria conferred knighthood on him in recognition of his services to her son-in-law, Emperor Frederick, who, shortly before his demise conferred upon the Doctor the Grand Cross of the Hohenzollern Order, with star. The introduction of the laryngoscope into English practice was claimed by Dr. Mackenzie. He was a member of several prominent medical societies, and author of numerous publications on laryngological subjects, one of his treatises, "Diseases of the Throat and Nose," having appeared in English, French, and German.

THE KALAMAZOO ACADEMY OF MEDICINE.—The adjourned annual meeting of the Academy occurred on Tuesday, February 9, at the court-house in the city of Kalamazoo. Professor Gibbes, of the University of Michigan, delivered the address on the occasion, his subject being "The Formation of Cavities in the Lungs." The papers read at the meeting will be published in an early issue of The Physician and Surgeon. The reports of the secretary and treasurer indicate that the Academy is in a prosperous condition. It has seventy active, and fifteen corresponding, members, and much interest is manifested in its deliberations. A library is maintained, periodicals subscribed for, and through the magnanimous bequest of one of Kalamazoo's public-spirited citizens, a commodious new reading-room, which is nearing completion, will soon be dedicated to the use of the Academy. The election of officers for the ensuing year resulted as follows: President, William B. Southard, Kalamazoo; vice-presidents, Irwin Simpson, Kalamazoo, J. M. Rankin, Richland; secretary, O. A. Lacrone, Kalamazoo; treasurer, O. B. Ranney, Kalamazoo; librarian, E. H. Vandeusen, Kalamazoo; censors, Chas. Bloodgood, S. C. Van Antwerp, Vicksburg. The annual banquet was given at the American House in the evening.

DR. HOWARD SMITH died at New Orleans, January 30, of la grippe, aged sixty-nine years. During President Polk's tenure of office, the Doctor had charge of the Marine Hospital at New Orleans. During the rebellion he was a surgeon in the confederate army, and had control of the entire medical service of the trans-Mississippi department. Later he occupied the chair of materia medica in the New Orleans School of Medicine, and was the representative of the New Orleans Board of Health for Central American ports.

HARPER HOSPITAL AT DETROIT. — The committees for the ensuing year, just appointed, are as follows: Visiting—Mesdames R. A. Alger, William H. Elliot, Wm. A. Moore, S. M. Cutcheon. On nurses' halls, wards and rooms—Mesdames Elizabeth L. T. Farrand, Theodore D. Buhl, James Joy, William A. McGraw, Dr. Ernest T. Tappey. On men's halls, wards and rooms—Mesdames Jacob S. Farrand, David Whitney, Jr., Dr. Ernest L. Shurly, Joseph Black, Gilbert Hart. On women's halls, wards and rooms—Mesdames Henry D. Sheldon, Richard P. Williams, Lucien S. Moore, Dr. Frank W. Brown, Watson M. Freer. On first floor—Miss Annie E. Hudson, Mesdames Frank M. Thompson, Wm. R. Farrand, H. C. Wisner, Jas. B. McKay. On reading rooms—Mesdames Wallace Radcliffe, C. Angell, John N. Bagley, Louis R. King, Ed. E. Armstrong. On entertainment—Mesdames Homer Warren, Lyster E. Gritter, Howard W. Longyear, Bethune Duffield, Miss Henrietta Moore.

ANOTHER INSANE ASYLUM BURNED.—The four-story main building of the state asylum for the insane at Jackson, Mississippi, was set on fire about five o'clock on the morning of February 16, by J. D. Brown, an inmate of the institution. Brown had recently escaped and was only returned the day before the fire. He threatened revenge if he was again confined. His threat was soon put into execution and he, unable to escape from the building, burned to death, a victim of his insane deed. There were six hundred inmates in the building, most of whom were asleep when the flames were discovered. Through the exertions of the superintendent, Dr. Mitchell, and his subordinates, all were saved and safely transferred to the wings disconnected from the burning pile. After performing this task Dr. Mitchell, just up from a sick bed, staggered and fell, overcome by the fearful ordeal through which he had passed, and was conveyed to his residence. Assistant Noland Stewart, after heroic and successful endeavors, also succumbed. A fireman held his post with a hose until his shoes and clothing took fire, when he escaped through a window and sought refuge in a pond. The building was of brick and had a frontage of about five hundred feet extending from east to west. It is situated about two miles from the city proper and the flames had gained fearful headway before the fire department arrived on the scene. Nevertheless, much of the loss could have been prevented had not the pressure from the water works been too light to be of any service. The building was about two-thirds destroyed, entailing a loss to the state of probably two hundred thousand dollars. There was no insurance. The legislature has appropriated twenty-five thousand dollars to meet immediate demands. The East Mississippi Insane Asylum at Meridian is accommodating about seventy-five of the inmates. Seventy-five of the more violent ones have been temporarily transferred to the penitentiary, which is almost empty, the convicts being leased. The recurrence of these disasters should direct attention to needed legislation.

RECENT PUBLICATIONS.

REVIEWS.

CONSUMPTION: HOW TO PREVENT IT, AND HOW TO LIVE WITHOUT IT.*

IT would be extremely difficult to take exception to anything appearing in Dr. Davis' little work upon consumption. It is characterized throughout by careful conservative discrimination, and a proper estimation of the value of such excellent things as pure air, good climate, hygienic clothing, exercise, rest and diet. It is upon attention to these that the author most insists, and if his injunctions were universally obeyed, much more gratifying results would appear from the therapeutics of tuberculosis. The so-called specific lines of treatment do not figure extensively in Dr. Davis' book. The spirit of the work is admirable.

* By N. S. Davis, Jr., A. M., M. D., professor of the principles and practice of medicine in the Chicago Medical College. Cloth. One hundred and forty-three pages. F. A. Davis, Philadelphia.

DISEASES OF THE BLADDER AND PROSTATE.*

DR. WYMAN discusses the subject of diseased conditions of the bladder and prostate in a pleasant and profitable manner. The whole field is passed under review, and most of the modern methods of operation in this department of surgery, are described and commented upon. The book is particularly well-written, and will be much valued by those to whom it is specially dedicated.

* By Hal C. Wyman, M. Sc., M. D., professor of surgery in the Michigan College of Medicine and Surgery, Detroit. Price: paper, 25 cents; cloth, 50 cents. Physicians' Leisure Library. George S. Davis, Detroit.

LESSONS IN THE DIAGNOSIS AND TREATMENT OF EYE DISEASES.*

THIS is another of the manuals for the busy practitioner which that enterprising publisher, George S. Davis, provides for very modest compensation. The book appears to be reliable in every way and concisely describes the mode of treatment that should be pursued in common ophthalmological diseases.

* By Casey A. Wood, C. M., M. D., professor of ophthalmology in the Post-Graduate School, Chicago. Price: paper, 25 cents; cloth, 50 cents. Physicians' Leisure Library. George S. Davis, Detroit.

THE CHINESE: THEIR PRESENT AND FUTURE—MEDICAL, POLITICAL, AND SOCIAL.*

HERE is a pleasant description of life in China. The account would appear truthful, and the manners and customs portrayed in these pages are doubtless those of the Chinese themselves. There is a good description of the home life, dissipations, and diseases of the people. The author's views of the opium

question, are fortified by his medical experience of the treatment of habitues of the drug. The book will be read with interest, by physicians and all others interested in the life and habits of the disciples of Confucius.

* By Robert Coltman, Jr., M. D., surgeon-in-charge of the Presbyterian hospital and dispensary at Teng Chow Fu. Illustrated. Cloth; two-hundred and twelve pages. F. A. Davis, Philadelphia.

REFERENCES.

BOOKS AND PAMPHLETS.

"Tobacco Insanity and Nervousness." By Dr. L. Bremer, Saint Louis.

"Stricture of the Rectum." By Chas. B. Kelsey, M. D. Second edition.

"Microscopical Diagnosis of Tuberculosis." By Paul Paquin, M. D., Battle Creek. The Little Blue Book Company.

"The Therapeutic Aspect of some Ovarian Disorders." By Edward W. Jenks, M. D., L. L. D., Detroit. Reprinted from "Gynecological Transactions."

"Non-Uterine Accidents Dependent upon Pregnancy and Parturition." By Harriet A. Gerry, M. D. Reprinted from *Annals of Gynecology and Pædiatry.*

"Notes on General *versus* Local Treatment of Catarrhal Inflammation of the Upper Air-Tract." By Beverly Robinson, New York. Reprinted from *Climatologist.*

"Femoral and Ventral Hernia in Women: The Kangaroo Suture." By Henry O. Marcy, A. M., M. D., L. L. D. Reprinted from "Transactions of the American Association of Obstetricians and Gynecologists."

Mr. W. B. Saunders, of Philadelphia, is about to publish two important books—"An American Text-Book of Surgery," by Professors Keen, White and others, and the "American Text-Book of the Theory and Practice of Medicine," by Dr. Pepper.

"Tuberculin: The Value and Limitation of its Use in Consumption." By Charles Denison, A. M., M. D., of Denver, Colorado, professor of diseases of the chest and of climatology, medical department University of Denver. Reprinted with revisions up to date, February 1, 1892, from "Transactions of the Colorado State Medical Society."

J. B. Flint & Company, New York, has in press "A Complete System of Gynecology and Obstetrics," revised by Chas. Jewett, M. D.; also "Flint's Condensed Encyclopædia of Medicine and Surgery," arranged upon a new system; also the "Electro-Therapeutics of Gynecology," by A. H. Goelet, M. D. Notices of these will appear on publication.

Mr. E. B. Treat, of New York, has in press for early publication the 1892 "International Medical Annual," being the tenth yearly issue of this deservedly popular work. It is the embodiment of what is worth preserving of the current medical journals of the world for the year, and will contain over six thousand references to diseases and their remedies.

MEDICAL PROGRESS.

MEDICINE.

AT WHAT AGE MAY A WOMAN MARRY?

THE question as to the suitable age for a woman to marry is one that concerns alike the philosopher, the political economist, the moralist and the physician. It involves so many interests, and needs to be studied under such different aspects, that it is not strange the answers are sometimes widely different.

Plato, in his "Republic," asserted that twenty years was the proper age for a woman's marriage, while he deferred that of man until the age of twenty-five. Malthus regarded late marriage as the most important check to an increase in population greater than the increase in means of subsistence. Wise political economists in general would postpone marriage until there is a reasonable assurance of ability to support a family. But the Catholic priest, looking at the question from a moral and religious point of view, holds that postponement of marriages among a large body of men is the fruitful source of evil. Mr. Lecky, in his "History of European Morals," makes the following statement: "The nearly universal custom of early marriages among the Irish peasantry has alone rendered possible that high standard of female chastity, that intense and jealous sensitiveness respecting female honor, for which, among many failings and some vices, the Irish poor have been pre-eminent in Europe; but these very marriages are the most conspicuous proofs of the national improvidence, and one of the most fatal obstacles to industrial prosperity."

The influence of idleness in hastening marriage is unfortunately quite positive. It would seem that manual laborers when out of work would postpone marriage, but observation proves that in many cases this is an error. For example, it has been observed at Manayunk, Philadelphia, that during strikes in manufacturing establishments marriages among the unemployed operatives are more frequent. The evil consequences of such untimely and improvident marriages are that pregnant women frequently do not have proper food, care, and rest, and that many a babe comes into the world without having been provided with suitable clothing to cover its nakedness and to protect it from one of the first perils of infant life—cold. If a law were made forbidding a woman to marry until the proposed husband could prove that he was able to support her and their children, the number of marriages would materially lessen; but, as in the old mythology, Cupid is blind, and law is impotent to govern those pierced by his arrows; certainly, however, wisdom will be justified of her children who do not rush into matrimony when the alliance inevitably leads to pinching poverty and squalid misery.

It is possibly true that early marriages may be advisable as a prophylactic against licentiousness; but it is protection of the male primarily rather than of the female that is thus sought. If young men had suitable and sufficient physiological, moral, and religious training, the necessity for such prophylaxis would be lessened. If, furthermore, the pitiless and inexorable judgments that society commonly visits upon the poor girl who lapses from virtue—branding her with

a pariah-curse, and her offspring with a bastard's name and shame—were not thus restricted, if it were correspondingly severe to the author of her ruin, there would be less difficulty in deciding the matrimonial problem; a scheme of morals that punishes one transgressor exclusively fails in justice, and cannot abide—equal guilt demands equal punishment, without regard to sex. In certain circles the seducer is readily forgiven, and the man who has habitually associated with prostitutes can enter their sacred bounds, and in virtuous households become eligible and accepted as a husband, while the same households would not so much as let one of his former female associates be admitted into their kitchens, when she was endeavoring to end a life of shame and earn an honest living by daily toil. A woman had better never marry than open a private hospital and reformatory for a diseased and dissolute man. Too many young men are sowing wild oats, not thinking of the inevitable harvest—one that not only they, but also their wives and children must reap—of suffering, sorrow, disease, and death, instead of joy, happiness, health, and life. "Stop the licentiousness of men," said an experienced surgeon, "and more than one-half of the grave abdominal operations performed upon married women, so frequent in recent years, would not be needed."

But while the physician is political economist, moralist, and philosopher, or at least ought in some degree to be all these, looking at the question solely from a professional stand-point, the recently published investigations of Korosi, at Budapest, show that mothers permit their daughters to marry earlier than is best. According to his statistics the mortality of children is much greater when born from early marriages, while such of these children as do survive are not strong and healthy. In order that this mortality be reduced to the normal, the mother should be twenty-five years old when commencing to bear children. The young man of twenty is also too young to marry, if the interest of the children be considered. Furthermore, fecundity, *per se*, is not a cause of child-mortality if the parents have married at a suitable age, because, while true that this mortality is greater in large than in small families, the chief cause is found in the poverty of the former. Here again it seems that the question of marriage belongs in part to political economy. But in general it may be stated that a woman is wise who delays her marriage until she is twenty-four or twenty-five years of age; at least this is the plain lesson to be learned from Korosi's investigation.

INSANITY AND GENIUS.

A GREAT deal of comment has been excited by the publication in English of Professor Lombroso's work on "Insanity and Genius." It is a work in which the author claims that genius is the evidence of a degenerative taint, and is, in fact, an "epileptoid degenerative psychosis." We trust that our readers will not be made to feel a sense of apprehension concerning their own mental soundness by Professor Lombroso's thesis. It is one that has been worked at before by Moreau de Tours and a good many others, and neither the world in general nor the medical profession in particular has been seriously impressed by it. Men of genius have not, as a rule, been mad, except with an insanity of scientific and scholastic kind, such as the world really needs more of. The eccentricities, monomanias, and emotional exaltations of genius have been incidental, and were

not the basis of their character and temperament. Insanity is essentially a non-productive condition; no insane man has ever made a great discovery and originated great thoughts, or, by his own laborious efforts, changed the tide of human events. Insanity is a condition in which the power of adjusting one's self and one's conduct to the environment is lost. Surely there is no loss of this kind shown in the work or conduct of men of genius. Contemporaneous science has dealt somewhat kindly with Lombroso for the valuable work he has done and the new fields of study he has opened. But when he makes out Newton and Luther insane, and Christ a paranoiac, one must think that the professor himself has neither sanity nor genius.—*Medical Record.*

A NEW METHOD OF TREATING DIPHTHERIA.

In the *Practitioner* for 1891, Number CCLXXXII, page 430, we find a very instructive paper by Dr. C. Smith, based upon the observation of seventeen cases. His treatment consists in the continuous inhalation of vapor composed of a mixture of carbolic acid, eucalyptus oil, and turpentine until the patient is well, and at the same time support to the heart by stimulants, as well as tincture of digitalis, tincture of belladonna, and aromatic spirits of ammonia. The method of application is claimed to be new. Place the patient in bed—first, to facilitate the inhalation; secondly, by retention of the horizontal position to spare the heart. Fix a tent over the patient by arranging a sheet, which should not be too large, but should be closed in on every side, except in front of his face, so that he can look about, be readily watched, and receive a supply of fresh air. The ingredients are carbolic acid, one part; eucalyptus oil, one part; turpentine, from eight parts to four, if stronger preparation is desired. Use steam continuously in the cot; soak two cloths about a foot square in the mixture, place one close to the face, the other on the pillow near the head. For adults, one or two other cloths may be hung about the cot. These cloths must not touch the face, and should be kept continually moistened. Breathing must be done through the mouth. The acid preferred is Calvert number two, which is pleasant and causes less discomfort. If the stronger preparation is used, to combat the depression of the heart use brandy in full doses or the drugs mentioned above. Steam must be always used in laryngeal cases. Further disinfection of the room is not necessary and no case of further infection has occurred. Sometimes mercurial ointment can be freely applied to the skin of the neck and throat with benefit, and occasionally he used borax in the manner recommended by Hood, a small quantity being put in the mouth every half-hour, by day and by night, for several days.—*American Journal of Medical Sciences.*

THE USE OF THE NEWER ANTIPYRETICS IN INFLUENZA.

Little progress seems to have been made, says the *University Medical Magazine*, in the treatment of this malady. This is but what would be expected, however, owing to the obscure nature of the ætiology and pathology of the disease. Although there is every indication that the affection is caused by a specific micro-organism, *the* particular one remains to be demonstrated.

As the manifestations of epidemic influenza are not the same in different epidemics, or, in fact, in the same epidemic, and as at present we do not know of any specific, a large field for experimental therapeutics has been offered by the more or less constant prevalence of the disease during the past two years. This has not resulted in the discovery of any new remedies, but we have learned what *not* to use.

During the past few years the chemical laboratory has furnished us with many new drugs, an important series of which possess remarkable antipyretic properties, and, as ascertained later, some of them are analgesics as well. These qualities seem to indicate particularly their use to combat the fever, as well as the local or general pains so frequently complained of in the present epidemic.

Disappointment, however, often followed this method of treatment, and some of the deaths which occurred in the early part of the epidemic are charged to the use of these drugs. Evidence has been accumulating that these new antipyretic drugs are capable of acting as cardiac depressants. This is, perhaps, particularly the case when the heart is already weakened from other causes. Bearing in mind the profound prostration in many cases of influenza, it will be apparent that the drugs in question are dangerous weapons.

It seems that any one of the various systems of the body—the respiratory, the nervous, the vascular, or the digestive—may be particularly affected by the disease under consideration. This may be explained by the theory of a *locus minoris resistentiæ*. When the violence of the disease falls upon the circulatory system it is very important to avoid all cardiac depressants. This becomes of even greater significance if the heart or vessels be already diseased. The same caution should be observed in the case of children and the aged, among whom the disease numbers the majority of its victims.

It is to be recommended, therefore, that in this disease the new chemical antipyretics be used very cautiously, or not at all. It must be remembered that during the prevalence of influenza all diseases are apt to have an increased mortality, so that the same caution is to be borne in mind. It is, perhaps, superfluous to remark that the same argument holds good in the cases of the other cardiac depressants.—*New York Medical Journal.*

WANTED, A CURE.

THE influenza is once more in the air, wafted hither and thither throughout the habitable globe, a formidable, disabling and fatal pandemic. Once more we are urgently asked on all sides, "Have we a specific? Can we offer a cure?" It is the old delusion and the everlasting and unreasoning, but excusable, impatience for the miraculous and the impossible. "Disease comes by Providence and goes by medicine;" that is a durable and popular formula. Of specifics for sale there are of course a legion. To sell them is the business of the quacks: the Matteis, the Holloways, the Morrisons abound in specifics. There are a dozen available for cholera, for typhoid, for small-pox, for hydrophobia, for cancer—all equally plausible and equally useless except for commerce—and why not for influenza? But is there a specific for any disease? It is more than doubtful. The more we know of the nature and cause of disease, of its origin and life-history, the less we are inclined even to expect the discovery of specifics. Dis-

ease we know not as an entity, an enemy to be struck down with a club, or to be expelled by a drug, but as a process, the change of tissues and of fluids, the growth of a microbe, the proliferation of a cell, the secretion of a virus. We can modify the processes, we can lessen their virulent products, we can fortify against their worst effects; we can aid the evolution and perhaps guide it to health; sometimes we can arrest it; and often we can anticipate it. Thus we know how to ward off many diseases: Cholera, typhoid, small-pox, hydrophobia, they are enemies whom we can meet at the gate and forbid their approach. Deaths from either of these preventable diseases are for the most part violent deaths, inflicted by the ignorance of the people, the neglect of the sanitary authorities. *Populus vult mori.* In their search for specifics they parley with the enemy and they lose their lives. Of influenza we know less than of most other infections; it is aerial, communicable from person to person, and along the lines of travel. For it, as for scarlet fever, we have only isolation as a preventive and palliatives as a treatment. Perhaps one day we shall know more; but there does not seem any likelihood of the discovery of a specific, and judging from numerous analogies it is far from certain that there is in this any ground for reproach. At any rate it comes badly from a public and from a generation which is content to leave Great Britain without even one institute of preventive medicine, and which is left to an appeal for funds from a Lister and a Roscoe to found such an institute—in which lies a chief hope for further life saving and the advance of preventive and curative knowledge—while millions are lavished on weapons of destruction, or the more obvious means of charitable relief to physical suffering; and finally on the purchase of fraudulent "specifics."—*British Medical Journal.*

SURGERY.

FRIGHT AND CHLOROFORM ACCIDENTS.

THE reports of cases of death from fright and chloroform, which will be found in the current foreign journals, at least point a moral for anæsthetizers, for the relationship which exists between fright and cardiac failure is so well known and so generally recognized that any remarks calling attention to it are unnecessary. We are, however, quite confident that, oftentimes, serious symptoms and fatal results in anæsthetization depend as much upon disordered cardiac innervation as upon the effects of chloroform or other drug used for operative anæsthesia. Aside from the number of records of syncope and death from fright preceding operations in the preanæsthetic period of surgery, a still greater list exists in which the fatal result took place not at the end of a prolonged chloroformization, but after the first few inhalations of the drug, or, in other words, at a time when the nervous apparatus of the heart was so disturbed by mental emotions that only a few drops of a drug as powerful as chloroform were necessary to add the last straw to the load of the struggling organ. Again, this combined effect of fear and chloroform finds a still further aid in the reflex wave, which probably sweeps over the nervous system on the application of the surgeon's knife, for it is a well-authenticated fact that only advanced anæsthesia destroys the reflexes, and that almost the entire nervous

system is free from the effect of the drug chloroform, except that portion which perceives pain. Thus Snow records the case of a child who submitted to a lithotomy, anæsthetized, but conscious enough to be amused by toys. Complete or semi-consciousness being preserved, the condition of fearful expectancy is emphasized by the actual touch of the instrument to the diseased part, and the cardiac or respiratory disorder produced by the fear and the chloroform is deepened by the reflex impulse through sensitive nerves. We also know that irritation of a peripheral sensory nerve very greatly increases blood-pressure by a reflex influence on the vasomotor system, and in this manner the work required of a heart, already weakened, is still more increased.

Further than this, according to a series of experiments performed by Dr. H. C. Wood and the writer of this article, the passage of concentrated chloroform vapor into the larnyx may produce considerable cardiac inhibition by reflex irritation of the vagus nerves which causes prolongation of diastole, or, in other words, increases dilatation of the ventricles. If the heart be fatty or otherwise diseased, all these influences are increased in severity, and McWilliams has shown that cardiac dilatation frequently ensues under chloroform. In addition to the clinical and experimental evidence, so far adduced, is the experience of all experimenters, in America at least, that strange dogs, which have just been brought to the laboratory and are much frightened, when prepared for anæsthesia, almost invariably die suddenly after chloroform is given, unless it is used gently, so that the passage from the normal state to that of complete insensibility is so gradual as to avoid alarm. When death occurs in these frightened animals, the heart is found to be widely dilated and engorged with blood. These facts certainly have a practical bearing, and indicate that the surgeon who resorts to chloroform should anæsthetize his patient very gradually if fear is expressed or is evident from the expression of the face or manner, and that the operation should not be begun until the circulation has recovered from the initial shock of fear and the drug, nor until consciousness is sufficiently impaired to prevent a second sensory and mental shock when the first incision is made in the skin.—*Therapeutic Gazette.*

THE CAUSES OF FAILURE TO ABORT SYPHILIS BY EXCISION OF THE INITIAL LESION.

Excision of the chancre in the hope of aborting syphilis is an old procedure that has at times been quite extensively practiced. It has, however, never gained a permanent foothold; of a total of about four hundred and sixty cases on record, in only one hundred and sixty have successful results been claimed. By far the larger number of syphilographers of to-day are opposed to the practice, but among the minority who still adhere to it is the learned syphilographer of Paris, Jullien, who, in a recent article based upon an extensive experience, says: "I believe in the possibility of interrupting or attenuating the course of syphilis at the time of the initial sclerosis; we should not fold our arms during the period in which a patient's existence is to be decided, or think that all is lost before anything has been commenced."

Taylor (*Medical Record*, 1891, Number MLXXVIII) has reported a series of cases illustrative of the inutility of excision of the chancre. In one case, a

minute papule was first observed twenty days after the patient had indulged in sexual intercourse with a syphilitic. The sore was touched with pure nitric acid, and the greatest care was exercised to secure thorough removal of the lesion without contaminating the adjacent healthy tissues. The wound healed kindly; yet, notwithstanding the precaution that had been taken, the inguinal ganglia were typically enlarged thirty days after operation, and twelve days later general syphilitic manifestations appeared. In the second case, a minute fissure appeared on the dorsum of the penis seventeen days after sexual intercourse with a syphilitic. A piece of skin including the fissure, measuring half an inch by three-quarters of an inch, was excised. Healing was uninterrupted, and the scar showed no induration; but, twenty days after the operation, there was well-marked inguinal adenopathy, and subsequently, the usual secondary manifestations appeared. In the third case, an examination preliminary to the performance of circumcision revealed the presence, on the free border of the prepuce, of a small, brownish-red, not excoriated papule, about the size of the head of a small tack, which had appeared on the preceding day, two weeks after sexual intercourse. The operation was performed four days later. At this time there was no perceptible enlargement of the inguinal ganglia. As the prepuce was quite redundant, fully an inch and a half of tissue was removed; healing was prompt, without induration of the cicatrix. Thirteen days after the operation inguinal adenopathy was quite evident. Thirty-two days later a typical roseola appeared; shortly before this, minute hard cords could be detected on the dorsum of the penis. On microscopic examination of the excised portion of the prepuce, there was found at the site of the initial lesion a small, superficial, and sharply-circumscribed ulcer, surrounded by almost normal skin, except that the perivascular spaces were distended with small round cells, and the endothelial cells lining the arteries and veins were swollen, and appeared to be proliferating. This cell-investment extended a considerable distance beyond the ulcer. This condition of the blood-vessels seems to show that when the primary sore is quite small and of only a few days' duration, syphilis is deeply rooted and, in all probability, has involved the vessels even before the appearance of the sore.

For comparative purposes, microscopic examination was made of a prepuce upon the lower part of which, near the frænum, was a typical hard chancre of ten days' duration. It was found that at a distance of fully an inch and a half from the chancre, the cell-changes around the vessels were very decided, the cells being in process of active proliferation. As an instance of the great rapidity of the syphilitic infection, reference is made to the now classical case reported by Berkeley-Hill, in which thorough cauterization of a lacerated frenum, within twelve hours after coitus, proved powerless to prevent the development of syphilis. As a further confirmation of the view that the process of infection in syphilis is from the beginning one of constant growth and diffusion, reference is made to the observations of Kuleneff on the so-called lymphatic cord of syphilis. The cords were excised from the dorsum and sides of the penis in five cases, in which the chancres were of from a fortnight's to two months' duration. These cords were found to be dependent upon syphilitic endo-phlebitis and peri-phlebitis, the morbid process commencing primarily in the wall of the vein, probably in the inner coat. The tendency of the cell-infiltration to pass into young connective-tissue elements seems to indicate that the nature of the morbid process is

identical with that of the initial syphilitic sclerosis; and, according to Kuleneff, the development of this cord should be regarded as an early manifestation of vascular lesions in syphilitic patients.

In view of the facts, it seems probable that, contrary to the views heretofore held, in the first period of incubation, the infectious agent of syphilis is being rapidly diffused, instead of, as formerly supposed, smouldering in a cold and aphlegmasic manner in a sharply-limited area.—*Medical News.*

NEUROLOGY.

THE VISUAL IMAGERY OF ALCOHOLIC DELIRIUM.

THE visual imagery of acute alcoholic delirium is so characteristic and possesses peculiarities that are so constant in all cases, that it is well-nigh pathognomonic. This is true of visual anomalies not only when they occur in the acute delirious states of alcoholic poisoning, but also when they are manifested in states of chronic alienation caused by the same agent.

Does the reason of this uniformity lie in the specific effect of alcohol on nerve centers, in its action on nerve endings, or both? If the uniform result be due to the effect of alcohol on the general nervous system, where is its influence exerted with the determinateness that gives rise to a kind of ideational perversion that is constant? Alcohol affects the entire nervous system, central and peripheral; but the answer to the last question is not at once evident; and a review of alcoholic visual hallucinations, so-called, may afford a somewhat more satisfactory theory of the causation of the uniformity of these psychic anomalies than now prevails.

In mentioning the visual hallucinations of alcoholism as "so-called," it is intended to indicate a belief that these visual anomalies are not primary pure hallucinations; and that they should be more accurately designated as secondary, or illusional hallucinations. The use of the word hallucination, notwithstanding its oft-repeated definition, is indiscriminate; it is applied in too broad a sense, and thus diagnostic discriminations that might be made are lost. It is therefore necessary to briefly review the significance of the terms hallucination and illusion.

Hallucination is the spontaneous re-presentation in consciousness of a memory-picture with an intensity that normally characterizes presentation. Normally, re-presentation is essentially voluntary and slow; presentation involuntary and sudden. The intensity of presentation and re-presentation varies widely. Under certain normal conditions the presentative and re-presentative aspects of consciousness are very closely approximated, and subjective distinction of them can be made only by a very energetic exercise of attention and the voluntary use of some of the criteria by which they are ordinarily unconsciously differentiated. These criteria are contrast of intensity, the simultaneous exercise of two or more senses, and voluntary control of the succession of memory-pictures. Voluntary re-presentation of images is the psychical antecedent of hallucination. When voluntary re-presentation has been intensified by repetition and thus volition has come to be but a small causative factor in its production,

the domain of hallucinations has been entered, where re-presentations are spontaneous, beyond control of the will, and possess either relative or absolute presentative intensity. Hallucination is primarily central.

Illusion is primarily peripheral and essentially presentative. An illusion is a percept that, either by virtue of physical conditions outside of the organism, or by reason of conditions of the perceiving mechanism, undergoes perversion, more or less complete. This includes the falsification of percepts as a result of abnormal conditions of the peripheral nerves, the sensations thus perverted having their origin there. Thus this anomaly includes percepts arising in consequence of abnormal conditions of the sensory organs in an absence of external stimuli; and beyond physiological limits falsification of percepts may be induced by disease of nerve endings, of afferent paths, of subcortical centers and by general or focal disease of the cortex, or these pathological conditions may be combined in a variety of ways.

There is no diversity of views concerning illusions due to falsification of impressions coming from external objects. It is when subjective sensations, normal or abnormal, become perverted mentally that there is a lack of uniformity of designation. By many, such anomalies are called hallucinations. In a measure this practice is responsible for the prevalence of the view that peripheral organs are involved secondarily or excentrically, in primary, or pure, hallucinations. These subjective peripheral sensations are presentative and therefore primarily illusional, no matter to what secondary hallucinatory elaboration they may lead.

While the differentiation of hallucinations and illusions in the domain of general sensibility is difficult, there is little doubt that the subjective sensations of the cutaneous surface of insects, etc., on the skin, in alcoholism, are essentially illusional; and the same may be said of the various visceral sensations that so frequently are subject to misinterpretation in the chronic forms of alcoholic alienation. But the visual anomalies of alcoholism are usually called hallucinations without any qualification. It is believed, however, that these visual phenomena belong primarily to the category of illusions, quite as justly as the perversions of cutaneous subjective sensations; and it is possible to demonstrate a reason for this classification of these visual phenomena, that will be as clear as any that can be given for the designation of subjective cutaneous sensation as illusional.

The salient features of the visual phenomena of alcoholic delirium are constantly repeated in different individuals; the same, or generically similar visions recur again and again, indicating the active influence of a determining primordial psychical association. Snakes, reptiles, insects, in fact, the whole realm of real and fantastic animals, afford material for elaboration of alcoholic visual imagery.

It does not seem possible that alcohol is capable of exerting an influence on the physical substratum of memory that could alone condition so determinate a manifestation of imagination; and, therefore, it is necessary to look for the reason of this uniformity in the influence of physical conditions on nervous tissue made abnormally susceptible by alcohol.

An essential element in this visual imagery of animate objects, is movement; and this must be considered when seeking its cause. If physical conditions peculiar to the eye can be found, which, through the suggestive effect of a sense

of objective movements induced by them, could cause a constant reaction in ideation, a satisfactory explanation of the specific imagery can be given.

Under normal conditions there are certain entopic phenomena which cause objective projection of appropriate images that are never without an accompaniment of motion. The *muscæ volitantes* are seen as small objects, or united in zig-zag, or sinuous figures, always moving. Phosphenes are never stationary. Images of retinal blood-vessels with their moving contents and pulsation, would be perceived as moving objects. After-images are always changing or moving. Here then is entopic material enough to account for the visual objective projection of objects in motion; and it needs but a retinal condition that suffices to intensify the retinal images of these entopic objects, and a cortical state of higher impressionability (irritable weakness), that permits them to dominate consciousness, in order to induce a kind of ideation in which the idea of objective movement is paramount. This condition of the nervous system is brought about by alcohol. Whether the forms of the retinal images of entopic objects are directly suggestive of forms of animal life or not, though it is easy to fancy that in some instances they may be, is of small consequence in the production of the characteristic imagery. The suggestive effect of these retinal images on the mind depends on their movement.

In the mind, objective movement is almost indissolubly connected with ideas of animals—with images gathered from the animal kingdom of experience and story. This is among the first associations formed in the developing mind, and it becomes so inherently fixed that even when reason and experience have taught us to understand the nature of the forces in obedience to which inanimate objects move, yet involuntarily when an inanimate object is seen to move, the primitive mental association of movement and life asserts its sway, and we endow it with a fanciful life.

The *rationale* of the transformation of perceptions of objective movement into animate imagery is thus at once apparent—it is the result of a direct association of ideas.

The visual imagery of acute delirium due to any other cause, in many particulars, is like that induced by alcohol; and the assumption that similar physical conditions are the causative factors, is suggested. Another fact that favors this view is that, from the nature of the phenomenon, a pure hallucination could hardly occur without a comparatively equable condition of nervous activity in the cortex; mental confusion and rapid succession of memory-pictures could hardly find expression in that objective projection which perfects, or constitutes, an hallucination.

GYNECOLOGY.

THE TREATMENT OF ENDOMETRITIS.

KALTENBACH (*Centralblatt fur Gynakologie*, 1891, Number XLIV) disapproves of the application of caustics, which may cause atresia of the cervical canal. Forcible dilatation often repeated is also reprehensible, since lesions of the mucosa are thus produced, infection of which may readily give rise to parametritis through the medium of the lymphatics. Even if infection is avoided,

repeated dilatation, irrigation, or applications to the interior of the uterus keep the patient in a constant state of nervous irritability, detrimental to her health, aside from the danger of causing toxic symptoms. Many cases of catarrh fail to improve because proper precautions are not taken to avoid fresh infection. The vulva and vagina should be thoroughly disinfected before any application is made to the endometrium. After this has been done, the uterine cavity should first be cleansed with sterilized gauze, followed by an application of strong tincture of iodine. In cases of long standing the thorough use of the curette should precede these applications, this treatment to be repeated only at long intervals.

Mackenrodt (*Ibid.*) does not hesitate to adopt the same treatment (injection of tincture of iodine after curetting), even when the adnexa are secondarily affected, provided that the presence of suppuration is positively excluded. It is, of course, not begun until the acute stage has passed. Forty-five cases are reported, in none of which were any bad symptoms noted. Seventeen patients were cured and twenty-two were improved.—*American Journal of Medical Sciences.*

PEDIATRICS.

HYSTERIA IN THE NEWBORN AND IN CHILDREN UNDER TWO YEARS OF AGE.

A RECENT paper read before the Academie de Medecine, by Chaumier (*La Semaine Medicale*, December 2, 1891), presents some interesting observations of what the author considers infantile hysteria. If this neurosis has not hitherto been observed in the newborn, it is because, in the author's opinion, convulsive manifestations in young children have always been considered a special maladay, an eclampsia, which may replace the chill or the delirium of the adult, or may even be provoked by indigestion or simple malaise. The slightest degree of the affection in newborn infants is manifested by repeated fits of passion, without sufficient cause, and accompanied by cries. In a higher degree, the child will stiffen her limbs; her face will become violaceous and turgescent, or, more rarely, pale. Trembling may accompany or follow these attacks. Some children roll upon the floor or on the bed, making strong movements of the legs or arms, without always losing consciousness completely. In a still more exaggerated degree, the child suddenly ceases crying and loses consciousness; the body is most often rigid and the mouth widely open; at other times the body is limp and there are no contractions. These attacks are characterized by the parents as "fainting spells." Hysterical infants may be siezed with these spells in the midst of the cough of pertussis or bronchitis, or in a simple coryza. In these cases there is danger of confounding the attack with spasmodic croup. Children are likewise subjects of the fully developed manifestations of hysteria. After being crossed, or without any assignable cause, the child loses consciousness, the body and members are rigid, while the eyes are often convulsively moved and rolled upward. Sometimes spasms are noted in the rigid limbs, or, more rarely, disordered movements take place. At other times there is no rigidity, and the body lies supine and still.

These attacks may occur rarely, or, on the contrary, several times a day, constituting a veritable diseased condition. While it is almost impossible to demonstrate heminæsthesia or hyperæsthesia in these young subjects, the author has noted contracture and paralysis, as well as absence of the conjunctival and pharyngeal reflex. Prognosis is said to be favorable, and treatment much more successful than in the adult.—*American Journal of Medical Sciences.*

OBSTETRICS.

THE INFLUENCE OF PREGNANCY ON EPILEPSY.

A VERY exhaustive article by Dr. Guder on this subject is carried through two numbers of the *Medicinish-chirurgisches Centralbl.* The author has made extended research into the data bearing on this question. This, taken conjointly with his own personal experience of such cases, enables him to draw the following conclusions: That epileptic attacks were, as a rule, absent during pregnancy, but that they were always sure to make their appearance during and after the puerperal period; that there was the fact of the offspring of such women being predisposed to epileptic or eclamptic attacks, to be taken into consideration. For his part the author was disposed to persuade, as far as possible, epileptics from marriage and that if pregnancy did occur he was in favor of artificial abortion. He thought that an effective means of stamping out, or at any rate of preventing children being born with a predisposition to epilepsy, would be the sterilization of epileptics by castration or ligation of the tubes. As to the predisposition of epileptics to eclampsia there was still a great difference of opinion among observers in this direction. Nerlinger thought that for one thing a differential diagnosis of an attack, occurring during the puerperal state in an epileptic, was difficult to make, as to whether it was an epileptic or eclamptic seizure, and that as to the question of predisposition of epileptics to eclampsia the matter was by no means settled. And also that in young children predisposed by neurotic inheritance to epilepsy it would be a difficult matter to say whether the first attack was epilepsy or eclampsia. Fere thought that there was a close association, in predisposed neurotics, between epilepsy and eclampsia.—*Journal of Nervous and Mental Diseases.*

MEDICAL MELANGE.

TO DETERMINE PREGNANCY.—Dr. W. R. Lowman (*Medical Summary*) gives the following method: Examine under the tongue for two teats, about the size of number four shot, each attached to a slender cord in which a nerve runs, connecting with the genital centre. They are pale in the non-pregnant, but in the enceinte they are purplish-red.—*Western Medical Reporter.*

CIVILIZATION AND PAIN.—Civilized man has of will ceased to torture, but in our process of being civilized we have won, I suspect (says Dr. S. Weir Mitchell), intensified capacity to suffer. The savage does not feel pain as we do; nor, as we examine the descending scale of life, do animals seem to have the acuteness of pain-sense at which we have arrived.—*Annals of Hygiene.*

DIURETIN.—Ruggieri (*Rif. Med.*) tried diuretin in eighteen cases—five of pleurisy with effusion, one of pleurisy and peritonitis, five of cirrhosis of the liver, six of nephritis, and one of heart disease. He thinks the diuretic action of the remedy incontestable, but the increase of renal excretion is most marked in heart cases. It is less so in nephritis, especially in chronic cases. The drug has no effect in cirrhosis of the liver. Ruggieri does not agree with Gram that diuretin is well borne in all cases; in most of the patients on whom he tried it, its administration was followed by headache, giddiness, nausea, vomiting, and diarrhœa.—*British Medical Journal.*

INFLUENZA COLDS.—Few remedies are more reliable, and act better as a preventive, or lessen the distressing symptoms of an influenza cold, than the following mixture:

℞ Sodii salicylas, ... ʒjss.
Liq. ammon. acet., ... ℥ij.
Aq. camph., ... ad ʒvj.
Misce. Capt.: ʒss. omnis 3tiis horis.

If this preparation be administered every two or three hours when the first symptoms of cold come on, it will almost invariably ward off the attack.—*British and Colonial Druggist.*

HÆMATURIA DUE TO FATIGUE.—Hæmaturia is a symptom which is observed in a number of distinct affections, that caused by malaria being not uncommon in the south. The variety reported by Dr. M. Lannois (*Lyon Med.*) appears to be very peculiar in its nature. He observed it in a marble-worker, of thirty-two years of age. The trouble had existed since he was nine years old. Whenever he indulged in prolonged walking, or in any efforts which induced fatigue, hæmaturia was observed. Simply desisting from the exercise was followed by a disappearance of the symptoms. Slight albuminuria was detected. The hæmaturia was no doubt caused by a transitory renal congestion, which caused rupture of a few vascular loops, and the consequent presence of blood in the urine. Whilst the presence of albuminuria would indicate the existence of some sort of organic lesion, its exact nature could not be determined.—*Weekly Medical Review.*

MILK A MICROBE-KILLER.—The results of Dr. Freudenreich's experiments, as now published in the *Annales de micrographie*, are of the greatest importance. He finds that the cholera bacillus, if put into milk drawn fresh from the cow, dies in an hour, and in five hours if put into fresh goat's milk. The bacillus of typhoid fever takes twenty-four hours to die in cow's milk, and five hours in goat's milk. Other microbes suffer a like fate in varying periods. By this showing, fresh milk is a bactericide or killer of disease-causing micro-organisms. But Dr. Freudenreich's researches go yet further than the foregoing. He finds that milk maintained for an hour at a temperature of 55° (131° Fahrenheit) loses its power to kill microbes—a statement which is of interest in face of the common teaching which makes the purification of milk depend upon its being boiled. Again, the microbe-killing properties of milk become weaker the older it gets. Cow's milk after four days, and goat's milk after five days, cease to have any effect upon micro-organisms. The conclusions, at any rate, are altogether in favor of the consumption of fresh milk.—*British and Colonial Druggist.*

BROMIDE ERUPTION.—R. W. Taylor (*Journal of Cutaneous and Genito-Urinary Diseases*) points out that bromide eruption occurs in two forms. Usually beginning about the middle portion of the anterior surface of the legs, it may appear in an acute form, with follicular papules, discrete or aggregated. Some become pustular, and may develop either slowly or quickly. The lesions coalesce, and form encrusted uneven surfaces, becoming more or less salient. Ulceration may take place. Under the crusts a papillomatous surface is observed, which may even approach a fungating condition. Scarring and pigmentation are left. The other mode of invasion is by subcutaneous nodules of large or limited extent. First there is slight redness of the skin, the finger detecting some infiltration, and the lesion looking like erythema nodosum. The nodules, which are somewhat salient, and of a dull red color, may gradually become absorbed, or may develop into fungating patches similar to those observed in the previous form.

THE FOOD SUPPLY OF THE FUTURE, by Professor W. D. Atwater, of Wesleyan University, is the first in a series of papers in November *Century*, which will have especial value to farmers. The writer believes that the doctrine of Malthus —that the time will come when there will not be food enough for the human race, owing to the theory that population increases in a geometrical and food-supply in an arithmetical ratio—is one which need never give the world any uneasiness, owing to the great advances that are being made in chemistry. Science has shown what are the essential factors in vegetable production, and plants can now be grown in water or in sand by adding the proper chemicals. Professor Atwater gives the result of an interesting experiment recently made in his laboratory. Sea-sand was brought from the shore of Long Island Sound. To divest it of every possible material which the plant might use for food except the sand itself, it was carefully washed with water and then heated. It was put into glass jars, water was added and minute quantities of chemical salts were dissolved in it. Dwarf peas, planted in this sand, grew to a height of eight feet, while peas of the same kind, planted by a skillful gardener in the rich soil of a garden close by, reached a height of only four feet.—*Sanitarian.*

THE DIGESTIBILITY OF CHEESE.—It is the general opinion of the laity that the eating of cheese after taking food is an assistance to digestion. This view seems not to be in accord with the result of experiments made by von Klenze, as recorded in the *Allgemeine medicinische Central-Zeitung*, Number XVIII, 1891. He made very thorough tests of the various forms of cheese found in the dietary lists. For the experiments he used an artificial digestive fluid, to which were added fifty cubic centimeters of fresh gastric juice and three cubic centimeters of hydrochloric acid. Into this he placed a gramme of the cheese to be examined. Eighteen varieties were tested, and the following deductions made: Chester and Roquefort cheese took four hours to digest; genuine Emmenthaler, Gorgonzoler, and Neufchatel, eight hours; Romadour, nine hours; and Kottenberger, Brie, Swiss, and the remaining varieties, ten hours. Considering that in a healthy stomach digestion after an ordinary meal is completed in from four to five hours, it would seem from von Klenze's studies, that Chester and Roquefort cheese were the only kinds that were likely to be digested within this length of time, and that the other varieties, some of which are largely in use, not only did not assist digestion, but actually retarded it.—*New York Medical Journal.*

THE DIETETIC TREATMENT OF DIABETES.—In *L'Union Medicale*, Dr. Paul Cheron, after giving the principles underlying the dietary methods of Seeger, Senator, Frerichs, Naunyn, Schnee, Bouchardat, and Dujardin-Beaumetz, states that the diet for each particular case must be determined by experiment, regarding as absolutely prohibited those viands concerning which there is consensus of medical opinion. That the diet list should be enlarged at the earliest practicable moment, keeping guard as to the result by repeated urinary analyses. The nutrition must be kept up, but an excessive amount of food is a frequent cause of the disease. As an assistance, exercise (Bouchardat), freedom from care and anxiety, baths, life in the open air, are mentioned.—*American Journal of Medical Sciences.*

SHALL CLERGYMEN PAY THE PHYSICIAN FOR SERVICES?—This question has come up for discussion, based upon the bill of a Brooklyn physician made against the estate of a Catholic priest for services rendered. The heirs protested on the ground that it was usual for physicians to make no charges under the circumstances. There is no reason why this should be so, however, as was very properly stated by a priest in voluntarily answering the question in a letter to one of the newspapers. We entirely agree with the latter assertion and that, save in a very few exceptional cases, charges should always be made. The physician pays the priest for the marriage ceremony, for christening, and his heirs are expected to be ready with an honorarium when mass is said at the funeral of the doctor, when his many deeds of charity are over. Nor does the physician enjoy a free pew in the church of his choice on the score of helping the deserving poor of the congregation. As a mere matter of advertisement for practice it seldom if ever pays, as the clergyman in many cases chooses a physician for himself, but for policy sake does not care to recommend one doctor more than another for members of his flock. But more than all, the services to the priest or minister are valued in proportion to the amount actually paid for them.—*Medical Record.*

EXECUTED BY ELECTRICITY.—Charles McIlvaine experienced death by electricity at Sing Sing on the 8th instant. Physicians and scientists from all parts of New York solicited invitations to be present at the killing. The death chair involved in its construction a new feature—that of providing for the application of the current through both hands, as had some time ago been suggested by Thomas A. Edison. The chair itself is the outgrowth of ideas held by Prison Yardmaster Hillert, who, since the quadruple executions last July, has been studying to effect electric contacts without burning the flesh or scalding the skin of the subject. The new chair is fashioned in its general outline after the chairs previously in use. The new pattern involves a change at the arms, however; they are high at the back and fit closely under the armpits of the subject slanting downward to the front. The distinctively new feature was the provision of deep glass cells securely fastened so that the hands may be immersed in water which fill the jars. The water is a solution of chloride of sodium, and warm, so as not to shock the hands of the subject, nervous and on the brink of death. One of the cells received current from beneath, the other from above. The usual coil of conducting wire for the electrode for the head dangled from above. Stout broad straps were placed for fastening the wrists in the cells, and other bands held the elbows tightly.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

INTUBATION OF THE LARYNX.*

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PROFESSOR OF DISEASES OF CHILDREN, AND OF LARYNGOLOGY AND RHINOLOGY, IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.

Intubation of the larynx will ever be recorded among the brilliant achievements of the nineteenth century. The idea originated with Bouchut, of Paris, in 1857, but he like many another being discouraged by opposition and failure, abandoned the golden opportunity to render his name immortal, and left it for another with greater perseverance and genius to develop the operation into a successful procedure.

Bouchut's tubes were cylindrical and short, barely passing through the glottis, and with a head consisting of a slight rim. A thread was left attached to prevent falling into the trachea. Bouchut's enthusiastic claims for the operation and his condemnation of tracheotomy brought down upon him the ill-will of his colleagues, and a committee appointed from the Paris Academy of Medicine, headed by Trousseau, the great tracheotomist, pronounced the operation impracticable and criticised Bouchut and his operation so severely that after a few unsuccessful attempts the operation was entirely abandoned. So completely was the idea of tubage of the larynx crushed out that no further attempts were made in this direction for more than a quarter of a century. The bitterness of the controversy between the tracheotomist on one hand and Bouchut on the other, may be inferred from the following extract of an article from the pen of Bouchut appearing in the pages of the *Paris Medical:*

"Tubage of the larynx, which the enemies of the author believed dead, stirs itself beneath the shroud of academic eloquence in which it was involved. The clever heads of the times thought that their judgment was without appeal, and,

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

that once buried, that method was to be lost in forgetfulness and oblivion. But it appears that it has come to life again, and its merits have been discovered in America so far as to give it admission to the customary practice of surgeons. This is not done to satisfy our professors, but it has that effect, and no one has protested. Tubage had among us been buried alive, and, after thirty years, I am witness of its resurrection. It comes to us ready to meet the attack of its ancient enemies, of whom the more bitter have happily left this world and are buried in merited forgetfulness. 'Dead dogs do not bite.' At this time tubage is the order of the day and it is practiced, in croup, by the physicians of the large cities of America, to whom it gives results which permit it to compete with tracheotomy. It has even crossed the Atlantic, and, behold, the French journals are happy to speak of it to the profit of their readers."

In 1880 Dr. J. O'Dwyer, of New York, unaware of the attempts of Bouchut and his failure, commenced his experiments in this direction. His first tubes were bivalves with wire heads covered with gutta percha, and the first improvement consisted in constructing the head of metal. The tubes were introduced closed, and opened as the introducer was withdrawn. These tubes were soon found to be defective as membrane would crowd in between the blades causing obstruction. A straight elliptical tube was now tried. These tubes were short, differing from those of Bouchut only in the fact that they were elliptical instead of cylindrical. They were next increased in length that they might not be so readily expelled.

Having become discouraged with tracheotomy, and knowing of Dr. O'Dwyer's work in this connection, and being provided with a set of these primitive instruments through his courtesy, they were introduced into my private practice. Various accidents soon illustrated the necessity for further changes. With my third case the tube dropped through the glottis and into the trachea on account of the small size of the head. I not only lost the tube but the patient as well. In another case, upon post-mortem examination, the tube was found in the right bronchus with the head just above the bifurcation. Again these plain straight tubes were frequently rejected as there was nothing but their weight to hold them in position. This accident was especially of common occurrence among the older and stronger children in private practice. These accidents led first to the enlargement of the head of the tube to prevent falling through into the trachea, and second the addition of a shoulder or swelling in the middle of the tube to prevent too easy expulsion.

The greatest objection to the operation was on account of the inability of the patient to swallow readily, and for the next two or three years every effort was made to overcome this objectionable feature. First a rubber epiglottis was employed to cover the head of the tube during deglutition and this was replaced by a metal epiglottis controlled by a gold wire concealed in the upper end of the tube. This metal epiglottis completely closed the upper opening of the tube during deglutition, and was of great assistance as it enabled patients to swallow liquids which before was difficult or impossible. In the course of time, however, it was discovered that simply placing the patient in an inclined position, with the head lower than the body, was all that was necessary to enable patients to swallow without difficulty. This method of feeding after intubation was first employed by Drs. Carey and Casselbery, of Chicago, and was one of the greatest

advances made in the history of the operation. As this position overcame all obstacles in feeding the artificial epiglottis was abandoned as it was unnecessary and added a complicated mechanism to the tube. It occasionally happens that even an expert completely fails to introduce a tube into the larynx on account of its passing into the ventricles of the larynx. This has happened to Dr. O'Dwyer, and in one instance to myself, while others have had the same experience. To overcome this difficulty, Dr. O'Dwyer has had the tubes constructed with a bulb-like extremity. It remains to be proven whether this device is entirely satisfactory.

In this manner the tubes have been gradually evolved. The original introducer and also the extractor and gag have undergone various modifications but these changes have been modifications of convenience rather than of utility. In regard to the operation of intubation I wish to say that while in the hands of the expert it will accomplish results that cannot be attained by tracheotomy, yet it will never become a popular operation with general practitioners.

The operation is one of the most unsatisfactory and one of the most brutal ever devised by man, or it is one of the most brilliant, one of the most successful and satisfactory, according to the skill, gentleness, and celerity with which it is done. While the expert requires but from three to five seconds the bungler will occupy half an hour or an hour or will fail entirely. Too frequently the tube has been forced through the walls of the larynx and has appeared subcutaneously. One to do the operation quickly and well must not only possess natural dexterity but must prepare himself by special training, and must have a sufficient number of cases to become a thorough expert. It is an operation not for the general practitioner who sees but a few cases yearly and who cannot become skillful with so limited an experience, but it is an operation for the expert who by special training is entitled to the support of every general practitioner in his community. In every large city there should be at least two or three experts who should do all these operations, for it is only with a large experience that the best results can be obtained.

The indications for the operation are the same as are the indications for tracheotomy. The operation should not be postponed until the patient becomes moribund, unconscious, and pulseless, for while many will recover under these circumstances yet the prognosis will not be as favorable as when done earlier. The operation on the other hand should not be performed with the first onset of a croupy cough or the occurrence of slight dyspnœa for many of these will recover under appropriate treatment. When the dyspnœa becomes continuous with a loud stridor heard both upon inspiration and expiration; when there is sinking in of the soft tissue at the base of the thorax with a whispering voice and smothered, suppressed cough; when these symptoms are continuous and unrelieved by emetics, we should wait no longer. The rule is that such patients die unless relieved by surgical measures.

In regard to the method of operating but little need be said as it is a subject with which you are all familiar. I would simply emphasize the importance of keeping closely to the anterior wall of the throat with the point of the tube as it is introduced and in the median line. If the tube is passed off to one side of the larynx all the force that can be exerted will not cause it to pass into the larynx. I would also emphasize the importance of gentleness; many repeated

gentle attempts will do no harm, while a single prolonged, desperate struggle to force the tube into the larynx may cost the patient his life.

The success of the operation will depend not only upon the skill and gentleness with which the operation is done, but also the watchful care that is bestowed upon the patient subsequently. A great danger, and one always to be feared, is obstruction of the tube from masses of detached membrane. This danger will be met by first exercising proper care in the selection of a tube; and second, by removing the tube when there is evidence of membrane below it, when the membrane will be expelled. A tube should be selected of such size as can be readily expelled in case of emergency. There is no greater folly than to introduce a tight tube that cannot be expelled, and then leaving the patient in fancied security. Detachment of membrane below the tube rarely occurs suddenly. There are indications of partial obstruction usually several hours before complete detachment takes place. We shall observe a peculiar rasping, squeaking, frequent cough, sometimes a distinct flapping sound as a free portion of the membrane is forced up against the bottom of the tube. When these indications are present we should at once remove the tube, when the expulsive cough that follows will in the great majority of cases expel the membrane. In this manner membranous casts can be secured quite as effectively as after tracheotomy. It is not only necessary to watch the patient carefully on account of the danger from detachment of membrane below the tube but also for the purpose of superintending the nourishment of the patient. One should not be satisfied with simply telling the attendants how to feed the child but should give personal attention to the matter, not only showing them how to feed the patient but standing by and seeing that they do it properly. The patient can be taken on the lap and the head allowed to drop below the level of the body, or the head can be placed upon a pillow and then shifted over the side of the bed, or a pillow can be placed under the shoulders allowing the head to drop so that it will be lower than the body. The patient should be firmly held if necessary and be gently compelled to take nourishment. With tact and patience but little difficulty will be encountered.

In regard to medication, the same line of treatment pursued before the operation should be continued afterward. If there is pharyngeal diphtheria in connection with laryngeal obstruction the bichloride of mercury with peroxide of hydrogen should be frequently employed, in the proportion of one grain to four ounces. Tincture of iron in full doses should also be given frequently. If there is nasal diphtheria the local use of antiseptics is especially indicated, and I believe the solution of bichloride of mercury with peroxide of hydrogen, diluted somewhat, to be the very best. If there is but little pharyngeal diphtheria and the disease is manifested principally in the larynx, then I believe the bichloride of mercury should be employed as recommended by Jacobi, administered to the limit of toleration. The sick-room should be kept at a uniform temperature and the atmosphere moist by the constant use of a steam atomizer.

We are frequently asked, When should the tube be removed? This will depend entirely upon circumstances. If everything goes smoothly and favorably with no evidence of membrane below the tube it should be left undisturbed for four or five days. We should, however, remember that in case there is evidence of obstruction it should be removed at any hour.

In regard to the comparative value of intubation and tracheotomy, I would assert that intubation will accomplish what cannot possibly be accomplished by tracheotomy. Tracheotomy, in hospital practice, where patients can have every care and attention that is necessary, will yield fair results, but performed, as is intubation, among the poor and destitute as well as among the better classes; among the young and feeble infants as well as among the older children; performed on malignant and unfavorable cases as well as upon the favorable ones; performed upon all cases as they come without selection, tracheotomy under these circumstanees will not yield brilliant results. The great majority of my operations have been performed at the request of other physicians and I have not been summoned excepting as a last resort.

The statistics that I present this evening can be easily verified should any one doubt their accuracy. A careful record of every case has been preserved and names and dates can be given if desired. It has been my experience to have operated three hundred and eighty-one times, and there have been one hundred and forty-three recoveries or thirty-seven and fifty-three one-hundredths per cent. The ages have been as follows:

	Under 1 year,			12	cases with		4	recoveries, or		33.33	per	cent.
Between	1	and	2 years,	48	"	"	12	"	"	25.	"	"
"	2	"	3 "	64	"	"	17	"	"	26.56	"	"
"	3	"	4 "	66	"	"	27	"	"	40.90	"	"
"	4	"	5 "	76	"	"	32	"	"	42.10	"	"
"	5	"	6 "	35	"	"	19	"	"	54.28	"	"
"	6	"	7 "	26	"	"	9	"	"	34.61	"	"
"	7	"	8 "	24	"	"	10	"	"	41.66	"	"
"	8	"	9 "	11	"	"	6	"	"	55.55	"	"
"	9	"	10 "	6	"	"	3	"	"	50.00	"	"
"	10	"	11 "	5	"	"	2	"	"	40.00	"	"
"	11	"	12 "	3	"	"	1	"	"	33.33	"	"
Aged			13 "	1	"	"	0	"				
"			14 "	1	"	"	0	"				
"			20 "	1	"	"	0	"				
"			42 "	1	"	"	1	"		100.00	"	"
"			60 "	1	"	"	0	"				
				381			143			37.53		

First	100	cases,	27	recoveries or	27	per	cent.	
Second	100	"	34	"	"	34	"	"
Third	100	"	42	"	"	42	"	"
Last	81	"	38	"	"	46.91	"	"

PURULENT OPHTHALMIA.*

By DON. M. CAMPBELL, M. D., L. R. C. S. (Edinburgh), Detroit, Michigan.

SECRETARY OF THE DETROIT MEDICAL AND LIBRARY ASSOCIATION, ETC.

It must have occurred forcibly and frequently to the mind of any careful physician, who has delved much into the intricacies of ophthalmic science, how much his success or failure in the treatment of the diseases to which the delicate human eye is heir has depended upon his attention to or neglect of the *details*

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

and *minutia* of that treatment. In no other realm of therapeutics does so much depend upon the nicety of selection of our remedies, and if we do but give proper attention to these little pennies of treatment the dollars of success will surely be ours. It is therefore not with the intention or hope of presenting to you anything absolutely new or original that this paper is written but rather with the desire of presenting an old truth in a new light.

When I was still a very young devotee at the shrine of ophthalmic science the following case was presented to my notice, and its management thrown upon my shoulders—at that time none too broad.

A virtuous wife gave birth to an apparently healthy infant who, however, in two or three days developed a severe and sharp attack of ophthalmia neonatorum—one important division of purulent ophthalmia. Their lot being cast in a remote town of this state into whose midst no oculist had yet come, the family physician was thrown upon his own resources and did his very best under the circumstances. The case progressed from bad to worse but as long as the disease confined itself to the infant in question no more radical measures were deemed necessary, but unfortunately the mischief did not stop there. A sister of the affected baby—a pretty girl of fourteen years—inoculated her left eye with the infectious discharge from the baby's conjunctival sac and developed a malignant purulent ophthalmia which ran a rapid course and resulted in sloughing of the cornea.

This was the *status quo* when the sister was brought to me for treatment and I went to work at the poor girl armed to the teeth, as I thought, with all the classical remedies laid down in our books of reference for gonorrhœal ophthalmia, for such it in reality was, the father having confessed to me that a few months before he had contracted gonorrhœa and had infected his then pregnant wife.

My success in this case was very indifferent. It was never hoped that the eye could be saved intact for it was already damaged beyond redemption, but it was hoped that some impression might be made upon the disease; but in spite of hot antiseptic applications, daily scarifications and applications of nitrate of silver in strong solution, the disease ran its course and got well when it had spent itself at the enormous cost of an eye completely lost to a young girl.

The infant received a milder course of treatment, keeping chiefly in view absolute cleanliness, frequent and thorough disinfection of the conjunctival sac, with mild warm antiseptic applications and mild nitrate of siver solution to the everted lid led to a rapid and perfect recovery.

In spite of the lesson which now seems to have been fairly clearly set forth by these two cases, so strong was my conviction of the correctness of my treatment of gonorrhœal ophthalmia as it had been taught me in clinics and in the various text-books, that the succeeding three years of such treatment of these cases without a single absolute recovery in the adult was hardly sufficient to convince me of the error of my ways and start me on new paths of treatment.

Here it might be only justice to myself to say that one reason for my apparent obtuseness in not reading quickly the lesson which these cases were calculated to teach is the undoubted fact that purulent ophthalmia in the newborn is not nearly so fatal to the integrity of the cornea as the same disease in the adult, the reason being that in the former the ocular conjunctiva is generally

but little affected while in the latter the infiltration is frequently so great as to seriously interfere with the flow of nutritive material into the corneal canaliculi. Here the statement must be made again that under the plan of treatment by scarification of the ocular conjunctiva and strong caustic or astringent application it has always been my deplorable lot to see these cases never make a perfect recovery. My experience in this respect may be unique but such it was, and I am now convinced that I treated these cases too vigorously. The severe treatment was followed by severer reaction which still further interfered with the nutrition of that most important area of the eye, namely, the cornea.

Now, let me ask you to turn with me for a few moments to a scene of brighter hues, and with your permission I will detail four cases of gonorrhœal ophthalmia which have recently fallen under my observation. The first one I will give somewhat in detail as it inaugurated—though imperfectly—with me at least a new line of action in these cases.

Case I.—Mrs. W., aged thirty-seven, was first seen in consultation with Dr. Ainsley Smith, of this city. A diagnosis of double gonorrhœal ophthalmia was easily made, her husband confessing to being the guilty party. The severity of her case and her utter helplessness, made it necessary to remove her to the Detroit Sanitarium where she could and did get constant and careful attention. When first seen the left cornea had already sloughed and little could be expected from that eye. The right eye was in a typical condition from gonorrhœal ophthalmia, the cornea being surrounded by the chemotic conjunctiva as by a high wall, but its transparency still unimpaired.

I determined to pursue a milder course of treatment in this case than heretofore. Hot boric acid fomentations, frequent douching with corrosive sublimate solution—one to ten thousand, mild applications of nitrate of silver—five grains to the ounce, and one single scarification of the conjunctiva constituted the line of treatment carried out. Atropia several times daily. The one scarification was followed by such reaction that it endangered the eye and was not repeated. Under this line of treatment the case made a fairly rapid recovery. The left eye has now a densely leucomatous but not staphylomatous cornea and the right made a perfect recovery and is now unblemished in any respect.

Case II.—John McC., street car driver, referred to me by Dr. F. W. Mann. Had a gonorrhœa and a Hunterian chancre, and when he presented himself to me he exhibited the usual signs and symptoms of a severe and well established gonorrhœal ophthalmia. The treatment was the same as in the above case and the result was a perfect one. No blemishes remained.

In this case no scarifications were made, and the conjunctival sac was thoroughly syringed twice daily with a one to ten thousand warm bichloride of mercury solution, using for this purpose the two-ounce nasal syringe which I show you. Three or four syringefuls were used at each sitting, and after this a mild application of nitrate of silver—five grains to the ounce—was applied to the everted lid.

Case III.—John C., aged twenty—a mild case of gonorrhœal ophthalmia—consulted me July, 1891. The same line of treatment detailed in *Case II* was carried out with a like result.

Case IV.—Eugene P., aged thirty-six—a very severe case of gonorrhœal ophthalmia—consulted me September, 1891. He presented all the character-

istic symptoms and signs of this affection. The same line of treatment was carried out as detailed above and the result was a perfect recovery.

Looking, then, in perspective, at the result of our treatment, which involved scarification and strong application of nitrate of silver to this most delicate organ, and comparing my results thus obtained with those following a milder form of treatment, I cannot but be strongly impressed with the superiority of the latter. I recognize the fact that four cases may not be sufficient to establish a line of treatment, but still, in the face of the great difference in results I am emboldened to present them to you. That we are not in exact accord with the teaching of many prominent men on this subject is very patent to any one familiar with the current ophthalmic literature, nevertheless our own personal experiences are always more powerful pleaders than other men's opinions.

In speaking of the treatment of gonorrhœal ophthalmia, Suanzy says: "The applications of nitrate of silver may be in solution of fifteen to twenty grains to the ounce or," what is in my opinion still worse, "the solid mitigated stick may be used." The former of these applications is altogether too strong, and the latter I would characterize as brutal and exceeding bad practice.

Berry, of Edinburgh, says: "Nitrate of silver should not be used in stronger solution than five or ten grains to the ounce." I would say that five grains to the ounce is plenty strong enough.

Continuing, Berry says: "The cornea must be watched and any symptoms of loss of vitality counteracted, if possible, by free incisions made with scissors, and preferably in a radial direction in the chemosed conjunctiva." And he goes on to say: "Unfortunately this treatment is not always efficacious in arresting the dreaded complication." My own idea is that such a proceeding would tend to produce more trouble in an already affected cornea.

Hanson Grut (quoted by Berry) recommends a pericorneal section of the conjunctiva. This should not be practiced in these cases at all because the reaction following surgical interference in an already intensely inflamed and infectious eye is naturally very much more to be dreaded than the condition it is calculated to combat.

There are some authors who utterly condemn the use of a syringe in these cases claiming that the stream will disturb corneal epithelium, but even with this large and forcible syringe, if carefully used, no harm will result, the object in using so large a syringe being to thoroughly cleanse the eye and permit the use of copious quantities of the bichloride solution. In the prophylactic treatment of ophthalmia neonatorum a solution of bichloride of mercury has been used with equally happy results as that following the instillation of nitrate of silver according to Crede, showing that even here the bichloride can enter into successful competition with silver nitrate.

One thing more and I close. The state of New York recently passed a law making it a misdemeanor amenable to a fine of one hundred dollars for any midwife or nurse to fail to report to a medical man a case of purulent discharge from the eyes of young children coming under their observation. In view of the large number of eyes which in the past have been sacrificed to ophthalmia neonatorum this seems wise and good legislation. It might not be a very bad thing for the Detroit Medical and Library Association to inaugurate similar legislation in our own state.

PRACTICAL PATHOLOGY FOR BUSY PRACTITIONERS.

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SECOND PAPER.

ON HARDENING TISSUE FOR MICROSCOPICAL EXAMINATION.

The practitioner often finds himself in a position where it is necessary that he should have a microscopical examination to confirm his diagnosis. The conditions under which this necessity occurs may be divided into three classes—

(1) Where in the living patient the practitioner finds a new growth, the nature of which is obscure, and where without a positive diagnosis he is in doubt as to the advisability of operation.

(2) Where a tumor has been removed by operation, to confirm the diagnosis, and also in many cases to satisfy the patient, a careful microscopical examination must be made.

(3) Where a post-mortem examination has been made it is often necessary to make a microscopical examination to decide the cause of death, and sometimes to settle disputed points.

The most important general point applicable to all these is, that the material to be examined should be obtained in as fresh a condition as possible and should not be handled more than is absolutely necessary. When removed by operation it should, at once, be placed in the hardening agent, *without any preliminary washing.* The treatment of each class will be slightly different and they must be considered separately.

(1) In these cases the practitioner has a living patient to deal with, and consequently time is an object. He is also only able to obtain a small portion of the growth for examination, whether it is removed from some external part with the curved scissors or curretted from the interior of the uterus. This is of little consequence if intelligent care is taken in removing the portion. Where the growth is external it is important that a cut is made in a part that is not too much broken down or ulcerated and where the new growth is evidently progressing.

The next step consists in putting the removed portion in some fluid that will rapidly harden all the constituent elements and leave them, as nearly as possible, in their living condition. It goes without saying, that in hardening for rapid diagnosis, this cannot be done as thoroughly, as in cases where time is no object, but the following method will not alter structures so much that diagnosis will be interfered with.

For these cases, which the practitioner will meet with away from home and often unprepared, the best fluid for hardening, because always available, is alcohol. This need not be the alcohol of commerce, ordinary whisky will do, as even in prohibition households this is kept on hand for cases of snake-bite, etc. Procure a small bottle and see that it is clean; then fill it with equal parts of spirit and water and drop the small portion of tumor removed into this; gently shake the bottle to prevent it from adhering to the bottom or sides. Leave it in this for twelve to twenty-four hours, than pour off the spirit mixture and replace with pure spirit. Put a small label on the bottle with the date and name. After

twenty-four hours in pure spirit the material can be cut into sections and examined.

If the practitioner has not time to make the examination the bottle containing the material can be sent by mail to an expert for report. The best method of doing this is to place the growth in one of the small vials now so much used and cork it securely, then take a piece of soft pine wood an inch or so longer than the bottle and bore a longitudinal hole in it large enough to take the bottle, put a small piece of cotton-wool in the bottom of the hole, push in the small bottle and cork the hole over the bottle. The whole can now be sent by mail when wrapped up and directed.

(2) *When Tumors have been Removed by Operation.*—These are generally so large that if the method already given were used, the result would be, the outside of the growth would be hardened while the interior would undergo decomposition as the spirit could not penetrate through the superficial portion hardened by its action. To obviate this it is necessary, when the tumor is of any appreciable size, that incisions should be made to enable the hardening fluid to act on the internal portions of the growth; these need not divide it into separate portions, as when this is done it is impossible afterwards, in many cases, to get the exact relation of the parts. Take as an example a carcinoma of the mammary gland. When this is removed it is covered on one surface with skin. It is easy to make incisions from behind through the tumor up to the skin but not through it. In this way the hardening fluid can penetrate all parts of the growth, while its integrity is not destroyed. Spirit, however, is not a satisfactory hardening fluid when the tumor is of any size, but it may be used temporarily in a diluted state and afterwards the material can be placed in Muller's fluid. This fluid consists of—

℞	Bichromate of potash, ...	2 parts.
	Sulphate of soda, ...	1 part.
	Water, ...	100 parts.

This fluid will keep indefinitely and should be made up and kept for use when required. When a tumor is placed, on removal, in weak spirit, it should never remain in it more than twenty-four hours, and incisions should always be made directly after its removal from the body.

Muller's fluid acts slowly but when a tumor is placed in it, it is safe from decomposition, provided always, that the Muller's fluid is changed two or three times until it remains perfectly clear and free from any turbidity. This will vary with the amount of blood or pus in the tumor. A large quantity of the fluid must be used. It is not sufficient to take a bottle just large enough to hold the tumor and then fill up the interstices with Muller's fluid. It will decompose rapidly under these conditions. The fluid should be four or five times the bulk of the tumor.

Muller's fluid takes seven to eight weeks to harden material according to its size. After it has been long enough in the Muller's fluid it should be washed thoroughly and then placed in equal parts of spirit and water for twenty-four hours; then in pure spirit. In four or five days it will be ready to cut into sections. The only objection to Muller's fluid, beyond its slow action, is the discoloration it produces in the tumor. This can, however, be removed by soaking the material in a five per cent. solution of chloral hydrate.

Few practitioners are aware how beautifully these tumors, etc., can be reproduced by photography. A paper illustrated by a life size reproduction of some tumor or rare form of disease, with the details of the case, clinical history, etc., and a full report of the minute structure in the case of a new growth or of the change produced by disease in an organ, forms a most acceptable communication for the annual meeting of the State Medical Society.

(3) *Parts Removed at a Post-mortem Examination.*—In these cases the material cannot be obtained in a perfectly fresh state. In the cold weather, however, it is generally in such a condition that a microscopic examination can be made, provided it is placed in the hardening fluid directly after removal and without washing. In the hot weather of summer the material removed at a post-mortem examination is of very little use, as putrefactive changes have set in which obscure those produced by disease.

The best fluid for use in hardening tissues removed after death is Muller's fluid when this can be obtained; if it is not available dilute spirit can be used followed by pure spirit in the manner already described.

Where several portions of different parts of the body are put in one receptacle they should always be labelled, as they may be so altered by disease that their original structure is unrecognizable.

In every case the most complete history that can be obtained should be written down, and to this should be added the appearances found at the post-mortem examination, to be supplemented afterwards with the results of the microscopical examination.

[TO BE CONTINUED.]

CONSUMPTION.*

By C. H. McKAIN, M. D., Vicksburg, Michigan.

By the term consumption is meant those conditions where progressive wasting of the body is associated with consolidation and the formation of cavities in the lungs. While fibroid phthisis is a disease of great interest, the other varieties are more frequent and their causes are to some extent more obscure, and more interest attaches to them; therefore, this paper will be limited to a consideration of the varieties in which tubercle is supposed to enter as a factor.

This brings us to the question, What is tubercle? By the older pathologists two distinct varieties were described, namely, the gray and the yellow. Much labor was expended in the effort to bring out the features distinguishing the one from the other, and to make it plain which of them was the most frequent.

To Laenec is due the credit of first placing them in their true light, and showing that the two forms were not essentially different morbid products, being in the main, composed of the same substance, tubercle proper being at first gray in all instances, becoming yellow only as degenerative changes take place.

Virchow considered tubercle as a neoplasm due to proliferation of connective tissue cells, which, in their earliest stages, consist of minute gray granules. This form is invariable. Many cases of phthisis he considered as being of inflammatory origin, and therefore non-tubercular. To these he gave various names as seemed

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best to suit the origin or course, as chronic broncho-pneumonia, chronic lobar-pneumonia, chronic catarrhal-pneumonia, cheesy-pneumonia, and a variety of other terms.

Niemeyer is also of the opinion that many cases of phthisis are non-tubercular, and a number of other pathologists concur in this belief, considering chronic catarrhal-pneumonia as the only cause, attributing little or no importance to a diathesis or constitutional origin.

Flint, however, did not hold the same opinion, as he said: "The fact to be especially borne in mind is that pulmonary tuberculosis is not primarily and essentially an affection of the lungs. The tuberculous products proceed from a prior morbid condition of the system; or, in other words, the pulmonary disease is a local expression of a special constitutional affection called the tuberculous cachexia or dyscrasia." He attributed much to a vice of assimilation.

Greene, in his work on pathology, describes tubercle as a grayish-white, translucent, non-vascular body, of a firm consistence, and well-defined spherical outline. From his description we can form no opinion as to what he considered it beyond the physical and microscopical appearance of tubercle.

While the discussion of the varieties of tubercle were active, both the theory of Virchow as to the nature of tubercle on the one hand, and the inflammatory character of certain cases of phthisis on the other hand, were rejected by many pathologists.

In April, 1882, Dr. Robert Koch announced to the world that he had discovered the bacillus tuberculosis and that inoculation with this organism invariably reproduced the disease in susceptible animals. After numerous experiments on monkeys, sheep, rabbits, cats, etc., in many laboratories both in Europe and America, this statement of Dr. Koch seemed to be well sustained and his theory became the most generally accepted of any yet set forth. Accordingly, neither the histological structure of tubercle nor its tendency to undergo caseous degeneration suffice to characterize tuberculosis as a specific disease. Therefore, most pathologists have agreed, in this at least, that only such products as contain and result from the specific bacilli, deserve the name of tuberculosis, although histologically the same or similar. Thus tuberculosis is defined as an infectious disease which shows, as the result of the immigration and proliferation of a specific bacillus, conglomerates, small and large, consisting of cells with few or many nuclei and nucleoli, and disposed to undergo speedy caseous degeneration. Adhering to the accepted definition of tuberculosis it is difficult to understand how it can be transmitted from the father or even the mother. Sperma of tuberculous testicles has been found to be free from the bacillus as well as that from tuberculous patients with healthy testicles. Virchow also cites a case of a non-tuberculous fœtus from a mother with tubercular endometritis. It would also appear that he is right in supposing that in the event of transmission direct to the offspring, it should appear in the latter at an early period of the life of that offspring. In the experiments in laboratories in which the bacillus is injected into the tissues only a few weeks, often not many days elapse before unmistakable indications of infection manifest themselves in the animal experimented upon.

When we turn to the statistics with reference to the age at which tuberculosis appears, in infants we find three hundred and thirty cases recorded by Furst.

Of these but thirty-five occurred before the sixth month, while forty came between the sixth and twelfth month, sixty-six from one to two years, eigthy-two from two to four years, after which period they again became less frequent. Demmer, in the course of twenty years, had under observation one thousand nine hundred and thirty-two cases of tuberculosis in children. Of these the greater number occurred between the second and fourth years, which is in accord with results obtained by Furst. Of all of these but one occurred in the third week, one in the seventh, and one in the eighth week. Neither record a case of tuberculosis in the newborn. Epstein's record of two hundred infants from tuberculous mothers does not furnish a case of tuberculosis at birth, and but one at the tenth week. On the other hand Dr. Jacobi has seen one seven months' fœtus with numerous gray miliary tubercles in the tissue of the liver, peritoneal covering of the spleen, and a few on pulmonary pleura. The mother was of a consumptive family and died three weeks after confinement. While this case of Dr. Jacobi's is suggestive it appears to stand alone, and perhaps might have been accounted for by some abnormality in the placental circulation, had search been made at time of birth, as it is a well-known fact that, under certain circumstances the blood-vessels of the placenta are pervious, permitting a direct communication between the blood of the fœtus and that of the mother.

So far we have not considered the food problem as a causative agency in this connection. Infants being fed almost wholly on milk not unfrequently receive the bacillus into the stomach, whether it be from a tuberculous mother or a tuberculous cow. Far more frequently, however, it occurs that milk from a healthy cow becomes contaminated before it is received into the stomach. Thus a large percentage of cases that occur in early life are to be excluded from our list. Still another percentage of the same can be accounted for by direct contagion as the air passages of the newborn are far more susceptible than those of older children. Tubercle bacilli floating in the dry, warm air of the nursery find a fertile soil in which to reproduce when they are inhaled by the nursling.

It would seem, then, that in our present light we are justified in assuming that the bacillus of tuberculosis is not transmitted from parent to offspring. In making this statement I am aware that some eminent pathologists place the weight of their opinion on the other side of this question. While discarding the theory of the transmission of the bacillus of tubercle, hereditary transmission of the disease known as tuberculosis is claimed as a fact by common consent. I believe this is because of the great number of cases observed in the same family. Also that the child of healthy parents in whom no tendency to the disease has been manifested, when living with a family predisposed, under the worst possible hygienic surroundings, often continues healthy while those of the predisposed family succumb to the disease. Many, if not all, of my hearers now have in mind one or more instances corroborative of this statement. Vogle looks upon heredity as the principle etiological factor in the production of this disease, and concludes that external influences are injurious to those only who are predisposed. There is little doubt that this is an extreme view, and the fact remains that many in whom no taint of heredity is traceable, die of this disease. However, this does not disprove the theory of transmission. Of all cases it is estimated that two-thirds occur in persons predisposed or, at least, in families in which

there is a multiplicity of cases, which cannot be accounted for unless by the theory of contagion. Again referring to such authority as we have at command we find that, while some are apparently the result of direct contagion, in many cases this seems improbable as the first appearance, even in infants, is in the bones and lymph bodies. In fact this seems to be the rule when it occurs in the early periods of life. If such was the result of contagion by inhalation, would we not, as is pertinently asked by Dr. Jacobi, expect to find the deposit in the lungs instead. Further, children born of parents predisposed to, or suffering with, the disease often die early in life, even though they be at once placed under the very best hygienic surroundings—surroundings under which infants not so predisposed do well.

While I have been striving, on the one hand to prove that the bacillus of tubercle is non-transmissible, on the other, my efforts have been equally great to sustain the theory of the transmission of what has been called the tubercular diathesis. If that is made clear I will now ask, Do you believe in the unity of phthisis pulmonalis and tuberculosis? Eminent authority is not wanting by which to prove they are dissimilar. If we refer to the definition of tubercle as given above and quoted from Dr. Jacobi, which seems to be the one most generally accepted, we shall see that "only such products as contain the specific bacilli deserve the name of tuberculosis." Those histologically the same, or similar, are not included among the genuine, from which it would seem, then, to be pretty generally admitted that bodies resembling tubercles in physical and gross appearances do exist. Also that these bodies tend to undergo caseous degeneration resulting in distinction of tissue quite similar to that of true tubercle. This change is not a neoplasm, nor is it intimately connected with a specific neoplasm, but is wholly a retrograde metamorphosis. Can we not have a condition of the system which can be transmitted from parent to offspring marked by the tendency to caseous degeneration and retrograde metamorphosis, which degeneration tends more frequently to be set up in the lungs than other tissues, and which manifests itself as a result of but slight causes operating in those in whom this condition of system has not been inherited,—are able to endure with impunity? In such the serous membranes inflame easily. Often slight exposure will precipitate a pneumonia which tends to become subacute or chronic, and necrotic patches frequently occur in the larynx and bronchial tubes. Again the lungs of such individuals furnish a ready and fertile soil for the planting of the bacillus, and then if they have not already a cheesy pneumonia, pulmonary tuberculosis follows. In such also in whom caseation has gone on to some extent, with proper exposure, an acute or chronic tuberculosis may supervene, thus presenting both forms in the same individual. This not infrequently happens. Indeed Niemeyer says that the greatest danger to a majority of consumptives is that they are apt to become tuberculous.

Professor Gibbes, of Ann Arbor, says with reference to the pathology of consumption: "I am convinced that we must recognize two forms of disease which result in the formation of cavities in the lungs. One of these, pulmonary phthisis, occurring after broncho-pneumonia, is purely an inflammatory disease from beginning to end. Also from its incipiency to the close, each step in this form of disease is degenerative. In the other type, namely, pulmonary tuberculosis, the first step in the series of changes is a new growth of fibroid tissue

derived from the connective tissue of the lungs. After this growth has reached a certain size, which varies with the chronicity of the process, the center undergoes a necrotic change. Although one of these tubercular masses appears to be homogeneous, it is in reality made up of an aggregation of tubercles, and this tubercular process is always progressing on the outside, while the center is breaking down."

Etiology.—Relative to the causation of consumption I believe it is now generally agreed that a certain percentage of cases are the result of contagion or infection. Just what this percentage is I am not able to state. The investigations of Koch, Grancher, Nægele, and many others, show that the mere breath of tubercular patients does not contain the bacillus. Also that inhalations of vapor charged with cultures of the bacillus are highly infectious. Dried sputum of tuberculous patients contains bacilli in large numbers. Therefore, inhalation of air charged with dried sputum is dangerous even though the sputum be several months old. Gebhart asserts that sputum diluted to the proportion of one to one hundred thousand is still virulent. Those predisposed are far more liable to contract the disease when exposed to an atmosphere in which the bacilli are floating. Among the conditions favoring the development of consumption, impure air should be mentioned first. Professor De Forest, of Yale University, has collected a series of statistics bearing on this point. He says: "Of three thousand two hundred and fourteen cases at the Brompton Hospital, more than one half had had indoor occupations. The mortality in prisons is twenty-five to thirty-five per cent. higher than the rate for the rest of the world. In Germany in a poorly ventilated prison the death-rate from consumption was fifty-one and four-tenths per one thousand, while in a well ventilated prison it was only seven and nine-tenths per one thousand." Baer states that the air in the foot guards' barracks was in the proportion of three hundred and thirty-one cubic feet per man. The tubercular death-rate was fifteen and eight-tenths per one thousand, while in the horse guards' barracks with five hundred and seventy-two cubic feet per man the death-rate was only seven and three-tenths per one thousand. Also that proper ventilation soon reduced the foot guards' mortality.

Next to quantity of pure air stands quality, as to the amount of moisture. A dry air being far more healthful to those with weak lungs. Dr. Bowditch was the first to call attention to this. In two contiguous health districts of Ontario, one of which is a plateau free from malaria, and the other a flat malarial district, the deaths from tuberculosis were in the former eight and five-tenths per cent. of all deaths, in the latter twelve and seven-tenths per cent.

Next to the air supply, I would place the food supply. A sufficient quantity of wholesome food is very necessary. To keep the body warm is of the greatest importance. I have in mind a number of instances where children, half fed and poorly clothed, grew up. One family of six boys, I bear in mind, of which it was often remarked, "How can they live so?" They did not live, for before reaching manhood, four of them succumbed to this dread disease, the seeds of which, I believe, were sown in early life, as consumption is not hereditary in the family.

With reference to the symptomatology I wish to inform you in advance that I have no startling disclosures to make. If I chance while enumerating some of the symptoms and physical signs, to call to the mind of any gentleman present,

some point which he had nearly or quite forgotten, then shall I feel well paid for my labor. Following the views expressed relative to the pathology of consumption two varieties must be recognized. Of the two, the one in which tubercle centers as a causative agency is the more formidable.

Let us suppose that in the fourth week after an attack of broncho-pneumonia, there still remain lobules which are crowded with exudate. Unless resolution speedily takes place the lung tissue in the center of these patches will be damaged beyond repair, and will pass into a state of caseation. In such a case as this there will be, from the beginning, numerous small and medium moist rales, and if the foci are thickly set, some dullness on percussion with bronchial respiration. Also some cough with expectoration, frequent chills followed with fever and sweating. As the deposit usually takes place first in the connective tissue and around the bronchioles, and may be confined thereto for some time, the period depending on the chronicity of the attack, it is not difficult to understand why, with even a relatively large number of tubercles formed, there may be no physical signs to indicate their presence. The air cells are not yet involved. No infiltration exists. There is only an increase of connective tissue, consequently no dullness on percussion, nor bronchial breathing. However, the patient grows pale, emaciates, is troubled with shortness of breath on taking exercise, has a dry, hacking cough and feels quite indisposed. There is perhaps a slight elevation of temperature. It is not until the disease has extended to the air cells and bronchioles that unmistakable symptoms arise.

The clinical histories which have heretofore been widely separated converge at this point from whence they pursue the same course. The area of dullness increases, *pari passu*, with that of infiltration. With marked bronchial breathing over central portions, there may be broncho-vesicular respiration at the margins of the infiltrated patches. Unilateral dullness at apex is always very significant. This may be first detected in the supra-clavicular fossa. Often, however, in the back or in the supra-scapular fossa. Abnormal respiratory sounds and adventitious sounds will be heard in place of the normal respiratory murmur. At first vesicular breathing is merely modified, being diminished, interrupted or sometimes exaggerated with prolonged expiration. These associated with marked deficiency of the respiratory movement on the affected side greatly aid in the diagnosis. Evident contraction at one apex as revealed by inspiration, as well as numerous fine crackling rales, are very significant. Loud bubbling rales point to the presence of a cavity as they are definite indications of the occurence of rales in a larger space than is normally found in the apex of the lung. So also does metamorphosing respiration which begins as vesicular and suddenly becomes bronchial. Changes of percussion note as observed with the mouth opened and closed, as well as those alterations that take place with changes of posture suggest the presence of a cavity also. Fever is usually present but not unfrequently it is slight or absent throughout nearly the entire course. The more acute the attack, the higher, as a rule, the temperature runs. Chills are often a distressing feature of the disease, after which those depressing sweats follow. Those thin bony fingers, that pinched face, hollow cheek, with a hectic flush, those bright eyes, associated with that pitiable yet hopeful expression of countenance, forms a sad picture with which the general practitioner is but too familiar.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, JANUARY 11, 1891.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

DR. F. E. WAXHAM, of Chicago, Illinois, read a paper entitled "Intubation of the Larynx." (See page 97).

DR. E. L. SHURLY: My experience has been limited in these cases, and while I must congratulate the doctor on his brilliant record I cannot discuss the question from a practical stand-point.

DR. C. G. JENNINGS: DR. WAXHAM has done a great deal by his earnest advocacy and brilliant record for this operation. His results have indeed been magnificent, but my own experience has not been so favorable, and I am inclined, although I recognize intubation as the more æsthetic operation, to still adhere to tracheotomy because I have had vastly better results from it than from intubation. I feel that in my practice I cannot conscientiously recommend intubation in preference to tracheotomy. Perhaps it is my own want of dexterity, or perhaps I have not thoroughly mastered the details of the operation, as DR. WAXHAM must have done. I sincerely congratulate DR. WAXHAM upon his record in intubation.

DR. H. E. SMITH: I congratulate DR. WAXHAM on his brilliant record and able paper, and as to DR. JENNINGS, I would say that he does the operation of intubation well, and if his results are not good it is no fault of his.

DR. A. N. COLLINS: My experience has taught me that tracheotomy is the safer and more reliable operation for the general practitioner.

DR. WAXHAM: Out of twenty-five of my tracheotomies only two recovered, and I therefore will stand steadily by intubation. As to the membrane below the tube, it may break down and be easily removed, or it may be coughed up in casts, two or three of which I show you here. In either case it is as easily handled as after tracheotomy, but if the casts become very dense a tracheotomy may have to be made, but this, in my experience, has been an occurrence of extreme rarity. Some little time ago I had eight patients wearing intubation tubes at the same time, and of these five recovered. At the present time I have seven patients wearing the tubes, of whom four are convalescent. It is in the face of such results as these that I forsake tracheotomy and cleave to intubation.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, JANUARY 18, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS.

DR. DONALD MACLEAN exhibited pathological specimens—testicle, arm, etc.

DR. J. H. CARSTENS: The case of atrophied testicle which DR. DONALD MACLEAN has detailed to-night bears an analogy to the diseased ovaries which we removed, and the ovaries should be removed just as much as the testicle. These

cases of *diseased* ovaries should always be operated on and removed. That is the only way to make a radical cure of these cases. All cases of fibroma of the uterus should be removed and no time should be lost in dallying with electricity, etc. Antiseptics have removed almost all danger.

DR. G. W. STONER: Would it have been better had the arm been amputated below the joint?

DR. DONALD MACLEAN: It would have been impossible to have amputated lower than we did. This arm shows how the tissue will die almost *in toto* after a railway injury from the extreme violence done the tissues.

DR. J. H. CARSTENS: I do not believe the sloughing comes primarily from the violence of the injury. It is a septic process and is due to the introduction of septic germs either from without or from within.

[An interesting discussion of the germ theory here arose between DRS. MACLEAN and CARSTENS, the former attacking and the latter defending the theory.]

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, JANUARY 25, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

REPORTS OF CASES.

DR. J. H. CARSTENS reported an interesting case of difficult labor, a rigid os and consequent inability of the head to engage, or of the medical attendant to apply the forceps, being the chief points of interest. After several doses of chloral and of opium the os slowly dilated and the woman was safely and quickly delivered by Tarnier forceps.

DR. G. W. STONER reported a case of apparently complete recovery from acute Bright's disease in a young man. The line of treatment chiefly followed out was, in the beginning one fairly large dose of calomel, daily doses of podophyllin, which was given instead of elaterium but the effect being satisfactory it was continued, and copious draughts of cream of tartar lemonade. The doctor's experience with these cases is that they usually relapse.

DR. C. W. HITCHCOCK reported a case of tonsillitis, the point of great interest being the great swelling of the cervical glands reaching down as far as the clavicle. The patient made a perfect and rapid recovery.

DR. T. A. MCGRAW reported two cases of undescended testicles occurring in two brothers, and drew attention to the fact that such a condition in the sons is often an indication of undeveloped sexual nature in the father. The father of these boys was entirely beardless.

DISCUSSION OF PAPERS.

DR. S. G. MINER read a paper entitled "Albuminuria in Life Insurance Examinations."

DR. T. A. MCGRAW: The subject of albumen in the urine is an important one to life insurance companies. The companies might safely take some of these cases of transient albuminuria on a short term policy with a higher rate premium. Some form of limited endowment policy might safely be issued to such risks, but it is not fair to expect them to issue long term policies or straight life insurance on such lives.

DR. C. W. HITCHCOCK: Any case showing albumen in the urine must be regarded with suspicion and even if there be but a small percentage of albumen the urine should be examined and re-examined until a specimen free from albumen be found. The same may be said of sugar, and I now have in mind an instance where an applicant otherwise healthy exhibited a small amount of sugar upon several tests but finally the urine became free from sugar. I recommended the man (he being sound in all other respects), and he is now carrying a policy with the company. Some English companies have dispensed altogether with medical examination.

DR. G. W. STONER: There is no doubt as to the great importance of this subject. I do not think it any fairer to accept a man after repeated examination in which albumen is found until one clear specimen is shown, than it would be to keep an applicant who presents himself with a clear specimen waiting until a specimen containing albumen could be found and then reject him.

DR. S. G. MINER, on closing the discussion, said: The insurance companies pay us well for medical examinations and we should endeavor by more uniform careful work to return them in equivalent and remove the odium which clings to our profession from careless examinations.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, FEBRUARY 1, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS.

DR. DONALD MACLEAN exhibited an enormous solid fibrous or sarcomatous ovarian tumor. The uterus was immovable and an exact diagnosis could not be arrived at prior to opening the abdomen nor was it considered absolutely necessary. As to whether this be a malignant growth or not nothing but subsequent events will show. The microscope might throw some light upon its nature but the information gotten from this source is very uncertain and often misleading even when submitted to the very best microscopists available. The patient from whom the tumor was removed is making a good recovery.

DR. J. H. CARSTENS: It seems as though the microscope should throw some light on the nature of this growth.

DR. H. W. LONGYEAR: The removal of this tumor was a very difficult and prolonged operation. The diagnosis could not be made prior to opening the abdomen and removing the tumor.

DR. E. T. TAPPEY: This is an unusual growth in this locality. Ovarian tumors are usually cystic.

DR. DONALD MACLEAN: Yes; they usually are cystic, and this form is rare. My memory furnishes me only one such another case in my own experience. This one occurred in a young girl and was so large as to prevent the patient lying down to take the chloroform and before the operation was completed the patient was dead.

DR. G. W. STONER: TAIT says it is never necessary to make an exact diagnosis before opening the abdomen.

DR. DONALD MACLEAN: I believe as TAIT does in that respect.

DR. J. H. CARSTENS exhibited—(1) Ovaries and appendages removed from a woman suffering from chronic ovaritis with a reflexed and irritable uterus. Patient had suffered a great deal for many years. The ovaries and appendages were removed and the uterus sutured to the anterior abdominal wall—recovery; (2) The patient from whom this uterus was removed is the mother of ten children. Some years ago she had an ichorous vaginal discharge which, however, seemed to get better after a European trip. It, however, returned, and cancer of the cervix was diagnosed and a complete hysterectomy performed—recovery; (3) Large multilocular ovarian tumor removed from a patient who had been tapped once. There was complete adhesion to all the surrounding parts and the patient died twelve hours after the operation. This case illustrates the folly of temporizing with such a condition and the bad effects of tapping those cases.

DR. CARSTENS also detailed a case of Cæsarean section which he had performed at Harper hospital on account of an extremely contracted pelvis. Both mother and child are doing very well indeed. Two or three days ago he was called suddenly to perform Cæsarean section again on a woman who had suddenly died on the street. We were too late.

DR. DONALD MACLEAN: The case of cancer of the cervix which DR. CARSTENS has exhibited is a very interesting one, as is also his case of Cæsarean section. A question in the former case which confronts me is this: Was this complete removal of this uterus a necessary proceeding, or would it not have been as well to merely remove the diseased cervix alone? I think in these cases better results are obtained by the low, partial and less severe operation of the removal of the cervix, cutting well up beyond the diseased area. Many cases are successful after a partial removal, but I cannot now remember one case being alive in which total extirpation of the uterus was done for cancer. The Cæsarean section case is very interesting indeed and DR. CARSTENS deserves our highest praise and commendation for having so skillfully, expeditiously and successfully done the operation after having found a suitable case. Rapid death after laparotomies is a very serious and grave subject for us to consider. I do not believe it is from hæmorrhage or great escape of serum that these cases die; in fact, there is some element about these sudden deaths which we cannot satisfactorily explain. They die and we do not know when nor how, but when we consider that it is not an uncommon thing for the delicate thread of life to be suddenly severed even in an apparently healthy man, one cannot wonder that a woman, whose vitality has been reduced by disease, and whose nervous system has received the shock of a great operation, will occasionally die unexpectedly.

DR. H. W. LONGYEAR: The reason in these cases why we should make a complete hysterectomy is that we have no means of determining what headway the disease has made in its journey up the uterine mucous membrane, and by removing the whole organ we are much more certain of removing the whole of the diseased tissue.

DR. E. T. TAPPEY: The whole organ should be removed—(1) Because it can be easily done; (2) Because the danger to life is not much greater; (3) Because we are then much surer of getting all the disease removed.

DR. DONALD MACLEAN: You are no surer of having it completly removed after complete hysterectomy than after amputation of the cervix.

DR. DON. M. CAMPBELL exhibited a case of perfect recovery from gonorrhœal ophthalmia.

DISCUSSION OF PAPERS.

DR. DON. M. CAMPBELL read a paper entitled "Purulent Ophthalmia." (See page 101).

DR. R. W. GILLMAN: In treating these cases a two per cent. solution of silver nitrate acts well especially so in ophthalmia neonatorum. Statistics show that of gonorrhœal ophthalmia seventy-five per cent. are permanently disfigured and forty per cent. absolutely lost. In view of these statistics DR. CAMPBELL'S results are commendable. All parturient women who are suffering from gonorrhœa should have the vagina frequently, thoroughly and antiseptically douched during labor and the infant's eyes should be treated with nitrate of silver as a prophylactic.

DR. G. E. FROTHINGHAM: I must congratulate DR. CAMPBELL upon his results and the case he has shown to-night. A large percentage of eye affections are conjunctival, and therefore any affection of this membrane is of great interest to everybody. The mild plan of treating eye affections is certainly the best but it can be carried too far. In the early stages of gonorrhœal ophthalmia mild antiseptic treatment is the best, and after suppuration is thoroughly established nitrate of silver, in about ten grains to the ounce solution, is the best remedy. As strong as a fifteen grain to the ounce solution may, in exceptional cases, have to be used. If carefully done no harm will follow these applications.

DON. M. CAMPBELL, M. D., Secretary.

KALAMAZOO ACADEMY OF MEDICINE.

STATED MEETING, FEBRUARY 9, 1892.

THE PRESIDENT, ADOLPH HOCHSTEIN, M. D., IN THE CHAIR.

RETIRING PRESIDENT'S ADDRESS.

DR. HOCHSTEIN read his annual address, taking for his subject "The Country Doctor." He said: Remote from the centers of medical teaching and research, the country doctor is in some respects at a disadvantage compared to his city brother. The advantages derived from large libraries and clinics, which are at the disposal of the latter, keep him abreast with the advancement of his science. Frequent intercourse with the peers of his art will stimulate him to do his utmost to become their equal. The society meetings, attended by men of deep learning and vast experience, will necessarily furnish pabulum for earnest reflection, and will put each member on his guard to give expression to his thoughts only after thorough and mature deliberation. Thus a constant stimulus is present which will not allow the city physician to tread the old paths regardless of the advances which have been made in the broad field of medicine.

On the other hand, the scientific standing of the country doctor should not be under-estimated. His share in the world of science is not so humble, if we consider that he is the propagator of ideas and thoughts of greater minds. The country practitioner gathers his knowledge from his own experience, aided by

information from books and journals, and often lacking the free intercourse of thought with colleagues of the same standing he will be the more compelled to weigh matters carefully before he comes to conclusions which will not only satisfy himself, but will not reap the censure of his equals. The difficulty in obtaining counsel in the country throws him on his own resources; he knows the responsibility rests solely with him, and whatever he does, the fame as well as the shame will be attached to him. He has no one but himself to rely upon. This will make him cautious and prudent, while deliberating, and aggressive and audacious, after deciding. Thus we see, that in spit of the difficulties with which the country doctor has to contend, he need not be a tyro in his science, and I would even say, that just these hardships are the means which make him that which he generally is—a good observer and a ready thinker.

But there is another field, where his labors, I might say, are of almost the same importance, and sometimes of more benefit than the achievements in his practice. I refer to the influence that he can and does frequently exert upon the people at large. No man, not even the minister, is so intimately connected with his patrons, has the opportunity to look so closely into their affairs, knows their character and peculiarities so well, as the country physician, who, very often, looked upon like a member of the family, has seen in the same family generations be born with his aid, and grow up under his medical care. Who, then, will be listened to with more attention? Whose advice will be of more weight than that of the old family doctor, and who will be more fit to guide the people in the right direction than he?

Take social or hygienic reforms in his community,—the physician will be the man who, by judicious advice, will be able to enunciate hygienic rules for them, and finally effect their adoption. Therefore, should it be a *conditio sine qua non*, that the country physician should be a well educated man, not only competent in his profession, but well versed in other sciences, broad-minded, unprejudiced, so that the public can regard his words as the sentiment of perfect knowledge and ripe judgment.

REPORTS OF OFFICERS.

The secretary recommended that the committee on programme select a series of subjects for discussion during the ensuing year and allow the secretary to arrange the several programmes from the material at his command. This method was considered preferable to the one heretofore in vogue which specified the particular subjects to be discussed at each meeting.

The treasurer reported that the total receipts for the year amounted to $154.48, and the total disbursements to $114.83, leaving a balance in the treasury of $39.65.

The librarian recommended that the academy continue its subscriptions to the foreign and domestic medical periodicals heretofore selected for the library.

PAPERS AND CASES.

Dr. C. H. McKain, of Vicksburg, read a paper on "Consumption." (See page 107).

Reports of cases were made by Drs. Myers, Rockwell, Schaberg, Osborne, Pease, and Carnes.

O. A. LaCrone, M. D., Secretary.

EDITORIAL ARTICLES.

THE VELOCITY OF MIND.

FRENCH scientific circles have been regarding with some interest the phenomenal exploits of one Jacques Inaudi, whose powers as a lightning-calculator seem to surpass those recorded of the calculating-boys of former days. The abnormal rapidity of Inaudi's mental operations has naturally attracted attention to certain questions of more or less interest connected with the time-relations of mental processes.

Inaudi possesses the wonderful gift of being able to solve arithmetical calculations with prodigious rapidity, and unlike some of his similarly-gifted predecessors, he appears able to give a reasonable explanation of the methods he employs; so that his case becomes especially suitable for investigation. When asked how he contrived to multiply instantaneously one long row of figures by another equally long, he explained that he multiplied from the left just as one usually multiplies one hundred by ten. When asked to name the day of the week a certain day would fall several years hence, he replied immediately though he employed a method that would take an ordinarily-minded individual several minutes to carry out.

To what is this abnormal rate of mental speed due. The employment of recognized methods of calculation negative any idea that the result is due an association of intuitional elements. Inaudi's processes are fundamentally empirical, and their apparent instantaneousness in reaching a result is simply due to abnormal mental speed. Not that an intuitional factor in arithmetical processes is less unthinkable than an innate tendency in favor of some particular mode of artistic expression. The mind of Mozart and Inaudi both suggest the same problem. The rapid association of the empirical elements of perception which constitute the factors of arithmetical processes is fundamentally analogous to the power of combining sound perceptions by representative symbols, and the actual psychology of the two acts is probably very similar.

Inaudi illustrates in an extreme degree, the common every-day fact, that great differences prevail in the velocity of individuals' perceptions. No two people take quite the same time to understand an interrogation; no two children are quite the same in quickness of perception. The Irishman is reputed quicker in his appreciation of a witticism than the Scotchman, although the latter may retaliate by a more rapidly correct estimate of the possibilities of interest semi-annually compounded. The velocity simply differs in the order of thought.

Are we becoming more rapid-minded? Is education a process which conduces to permanent alteration in the velocity of perceptive and conceptive ideation? Probably the Brahmins of India present the best example of a class long-trained in intellectual habits, and while the Brahmins are manifestly elevated by mental superiority above other classes in India, they do not exhibit any distinct peculiarity in acuteness of perception, nor do they commonly produce minds of Inaudi's type. Inaudi himself claims no hereditary bias in favor of his strange gift; his father could neither read nor write. So that any such abnormal mental quality as his must be classed as a *lusus naturæ*, the key to the interpretation of which is as yet withheld.

EDITORIAL BREVITIES.

A PHYSIOLOGICAL STYPTIC.

It is rather curious that fibrin ferment, as one of the normal blood constituents of known agency in the production of coagulation, should not have been thought of before as a remedy for hæmorrhage. An English experimentalist, Dr. Wright, has recently conducted some highly successful experiments in the way of controlling bleeding. Recognizing that coagulability depended upon the fibrin ferment, and was also related to the amount of lime salts contained in the blood, Dr. Wright proceeded to prepare his styptic which is a solution of fibrin ferment with one per cent. of calcium chloride. Hæmorrhage proceeding from division of all the veins of a rabbit's neck was promptly controlled by gently swobbing the bleeding space with this solution. The possible uses of such a remedy as this, in hæmoptysis, placenta prævia, hæmatophilia, and other such conditions, may perhaps make this discovery an exceedingly beneficial one.

WAS IT HYDROPHOBIA?

The medical profession is accustomed to finding all kinds of hysterical vagaries designated hydrophobia. Here is an unusual case. A lady traveling alone in one of the helpless compartments of an English railway train, was annoyed by a gentleman jumping into the train just as it was starting. He appeared, however, an inoffensive individual and soon settled himself down on his traveling rug for a siesta. The lady was shortly after surprised and alarmed to hear a dog bark. The fearful conviction came to her that, as no dog had jumped into the carriage, the man must be barking, and the horrible thought passed through her, "Hydrophobia! he will tear me to pieces." She remembered that she could stop the train by pulling the communication-cord, but before doing so thought she would take just one look at the man. She did so, and greatly to her surprise, found him fast asleep. "Was it hydrophobia," she asks, "or do men ever dream they are animals?" A more pertinent question would possibly be "Was he asleep?" Probably he was not, but if he was he is certainly not the first to dream of being a jolly dog.

DISEASE AND WAR.

The enormous mortality from the influenza, which in London alone is calculated to have swept off five thousand lives, and probably disabled and invalided many thousand more, shows that disease after all is a far more potent agent of the gentleman in black with the sickle, than is war. Gettysburg had a good sized butcher's bill but the loss of six thousand lives in that battle does not begin to compare with the ravages of one attack of influenza. Without being paradoxical death may be described as a lively process. Dr. Richardson calculates that every year thirty millions of the human race pass over to the silent shades. The steady havoc of nature in one year exceeds the battle carnage of one hundred years. Every year one hundred and eighty thousand die by their own hand, more by seventy thousand than those who were killed in the four years of the war. A good deal of pulpit oratory is expended in denouncing the cruel results of warfare, but the loss of life from preventible disease seldom arouses the declamations of the most humane theologian.

APOPLEXY IN THE JURY-ROOM.

THE queen of Spain, it is reported, once fell off her horse. Her foot became entangled in the stirrup, and she was dragged in the muddy road. None of the officials near by could help her, for it was the sole privilege of the master-of-the-horse to assist the queen to dismount, and this public functionary was absent. History repeated itself in the case of the Fox will case recently tried in Boston. The court had been adjourned and the jury were deliberating on the verdict. One of the jurors was seized with apoplexy. The officer guarding the sanctity and secrecy of the jury-room was not empowered to grant admission to a physician so he sent word to the deputy sheriff. The deputy hesitated, but finally referred the matter to the sheriff. The sheriff declined to act and sent couriers to the judge, and he finally issued an order summoning a physician.

MEDICAL NEWS.

SMALL-POX is epidemic in Morocco.

VACCINATION is compulsory in Italy.

DR. H. R. CASGRAIN, of Windsor, was recently married.

YELLOW FEVER is prevalent to an alarming extent in Brazil.

SAINT PAUL, Minnesota, is to have a medical college for women.

PROFESSOR LUMNITZER, the popular Hungarian surgeon, is dead.

VIENNA will erect a hospital for the benefit of its consumptive poor.

FROM 1872 to 1888 insanity increased about thirty per cent. in Paris.

THE Kansas City medical college will establish a post-graduate school.

THE French congress of surgery will open its sixth session in Paris, April 18.

THERE are one hundred and five members in the French academy of medicine.

THE American medical association will meet in Detroit, June 7, 8, 9, and 10.

PROFESSOR VIRCHOW has been elected president of the Berlin medical society.

PURE CULTURES of the influenza bacillus have been made by Dr. Canon, of Berlin.

THE order of the liberator is a decoration accorded Dr. Austin Flint by Venezuela.

THE university of Pennsylvania formally opened its institute of hygiene on February 22.

THE annual meeting of the Kansas state medical society will be held in Fort Scott, May 3.

THE third international medical congress of Australia will be held at Sidney in September.

THE university of Virginia is considering the advisability of establishing a summer school.

ELECTRICITY is said to be an aid to the diagnosis of ulcer of the stomach. Pain is intensified on passing the constant current over the region of an ulcer.

THE Scotchmen in Chicago are going to erect a new hospital and dedicate it to Bobby Burns.

THE municipal council of Paris has subscribed five hundred francs to a memorial to Ricord.

THE Rush hospital for consumptives at Philadelphia was formally opened on Thursday, February 4.

DR. A. H. PAQUET, professor of clinical medicine in the Laval university of Montreal, died recently.

OUT of about five thousand patent medicines put on the market annually less than one hundred survive.

THE Georgia state medical association will hold its forty-third annual session in Columbia, April 20 to 22.

THE Jewish hospital, of Philadelphia, has been enriched ten thousand dollars by the will of Joseph Muhr.

THE university of Paris is the largest in the world with nine thousand two hundred and fifteen students.

IT is proposed to erect a crematorium in the Berlin city cemetery which shall be superior to any in Europe.

THE ex-internes of the Presbyterian hospital of New York organized an alumni association February 19.

THE Saint Louis medical college will have a new building to cost one hundred and seven thousand dollars.

DR. WILLIAM T. LUSK, of obstetric fame, has been elected an honorary member of the obstetrical society of London.

THE Eastern Kansas and Golden Belt medical societies will hold a joint meeting in Topeka, Kansas, April 7.

THE medical board of the Philadelphia hospital is considering the advisability of establishing an orthopædic department.

SEVERAL of our contemporaries are advertising a private hospital which is conducted by "a quack of the first water."

LONDON, England, has one thousand one hundred and twenty-three females in its population to every one thousand males.

THE Italians invented the word influenza in the seventeenth century attributing the disease to the influence of certain planets.

DR. J. H. BRYANT, of New York, has received the appointment of surgeon-general on the staff of Governor Roswell P. Flower.

DR. C. H. GARDNER, of Maryland, has been commissioned assistant surgeon in the marine hospital service by President Harrison.

THE association of militia surgeons of the United States will meet in convention in memorial hall, Saint Louis, beginning April 19.

THE New York state board of health have rendered a report in which it is estimated that ten thousand people died of influenza in that state during 1891.

THE BACILLUS OF GOUT.—An alleged bacillus is said to have been observed in three cases of acute gout by Dr. Edward Grun.

LEPROSY is on the increase in the United States of Columbia, and the establishment of a leper colony is being considered.

A NEW building is in course of erection for the school of medicine of the university of Buffalo. It will be a magnificent structure.

MISS JAGANANAHAM, a Hindoo lady, has recently graduated from Edinburgh with much distinction. She is now at the Bombay hospital.

BOSTON will ask permission of the state legislature to appropriate five thousand dollars annually for the maintainance of the Carney hospital.

THE Langenbech Haus, a building erected in Berlin as a place of meeting for all the local medical societies, will be formally opened in April.

SAINT PETERSBURG will build a home for aged physicians. About eight thousand roubles have already been contributed for this purpose.

EX-SENATOR F. W. HOWE has donated five thousand dollars to the Lowell (Massachusetts) general hospital for the establishment of a free bed.

A NEW hospital for children will be opened in Saint Louis. It will be free for all children of the poor, regardless of color, nationality, or creed.

THE Tennessee state medical society will hold its annual meeting in Knoxville, beginning April 12. The secretary is Dr. D. E. Nelson, of Chattanooga.

THE Illinois state building of the world's fair will contain an exhibit to be made by the women physicians, pharmacists, and dentists practicing in Illinois.

THE annual meeting of the Iowa state medical society will be held in Des Moines, May 18, 19, and 20. Dr. J. W. Cokenower, of Des Moines, is secretary.

THE association of American physicians will hold their next meeting in the medical museum and library, Washington, District of Columbia, May 24, 25, and 26.

THE royal college of physicians, of London, has two hundred and ninety-five fellows, five hundred members, and about three thousand three hundred licentiates.

AN international gynecological and obstetrical congress will be held in Brussels next September. Mr. Lawson Tait has been invited to act as chairman and has accepted.

DR. JAMES BOWIE, of Mitchell, Ontario, recently died of catarrhal pneumonia at the advanced age of ninety years. He had practiced his profession for upward of sixty years.

DR. WILLIAM D. MIDDLETON, of Davenport, Iowa, has been appointed surgeon-in-chief of the Chicago, Rock Island and Pacific railway, *vice* Dr. W. F. Peck, who recently died.

PROFESSOR KOCH has made still further improvements in the manufacture of tuberculin, although in a recent communication before the Berlin medical society, Koch confesses the action of tuberculin is not all it should be.

SIR GEORGE EDWARD PAGET died recently in his eighty-third year. He was professor of physic at Cambridge university, and a brother of Sir James Paget.

A SUMMER school of medicine is to be established at the university of the South, Sewanee. The sessions will be five months in duration, the first one beginning in April.

THE medical education of women in Saint Petersburgh has received a stimulus from the municipal authorities by way of a yearly grant of seven thousand five hundred dollars.

PROFESSORS HENEAGE GIBBES, M. D., AND J. N. MARTIN, M. D., of the university of Michigan, have been elected to honorary membership in the Kalamazoo academy of medicine.

DR. W. C. TOWNS, of Chattanoga, Tennessee, was recently horsewhipped on Market street by a woman who claimed that the doctor caused her child's death by improper treatment.

HOSPITAL SATURDAY AND SUNDAY.—The collections for hospitals in New York realized on these days last December will amount to sixty thousand dollars, the largest sum ever raised.

THE British association for the advancement of science will hold its sixty-second annual meeting in Edinburgh, from August 3 to 10, under the presidency of Sir Archibald Giekie.

DR. CLIFFORD ALBUTT, F. R. S., the inventor of the clinical thermometer, will succeed the late Sir George Paget, as regius professor of physic in the university of Cambridge.

THE legislature of Virginia has abolished the title of *lunatic asylum* as applied to the four institutions in that state for medical care of the insane and substituted the term *hospital* instead.

M. COLOMBAT has bequeathed ten thousand francs to the Paris academie des sciences as a nucleus for a biennial prize essay treating of diseases of the organs of speech or deaf-mutism.

MRS. CHIPPEWA, the largest woman in the world, died recently at Dog Lake near Winnipeg. She weighed seven hundred pounds. Her coffin was seven feet long by five feet wide.

THE regular meeting of the Kalamazoo academy of medicine was held in the court-house in the city of Kalamazoo on Tuesday, March 8. An interesting programme was presented.

A CHAIR of anthropology has been created in the university of Berlin, and Professor Wilhelm Krause, formerly of the university of Gottengen, has been appointed to its occupancy.

DIVORCE IN SCOTLAND AND AMERICA.—There were one hundred and forty-three suits for divorce in Scotland last year. In the United States three hundred and twenty-eight thousand seven hundred and sixteen divorces have been granted in twenty years. Divorce in the last ten years has increased seventy-nine and four-tenths per cent. or three times the ratio of the increase of population.

DR. JOHN CUNNINGHAM, of Wooster, Ohio, who recently died, was one of the earliest graduates of Jefferson college and had nearly reached his one-hundredth year at the time of his death.

A NATIONAL law to regulate the practice of medicine is being advocated. This would abolish state examining boards and give a competent physician the right to practice in any state.

THE medical examining board of Virginia will hold its first semi-annual session of 1892 in Richmond, Tuesday, April 19. The secretary of the board is Dr. P. A. Irving, of Farmville.

IN the United States there are forty-seven medical colleges for both sexes, and eight for the female sex exclusively. Five hundred women are graduated from these institutions annually.

THE Chesapeake and Ohio railway company has tendered free transportation and special trains to railway surgeons attending the annual meeting of the association at Old Point Comfort in May.

THE gold medal given to Virchow on his seventieth birthday is the largest ever made. It weighs nearly six pounds, and the metal alone is worth one thousand seven hundred and fifty dollars.

THE WOMAN'S HOSPITAL, DETROIT.—The ladies of the managing committee announce that they have several boys and girls varying from six weeks to five years of age for whom they desire to find eligible homes.

IT is estimated that there are one hundred and forty thousand blonde hairs to the head; one hundred and three thousand black; one hundred thousand brown; ninety thousand red. The former color is the finest, the latter the coarsest.

FRENCH POPULATION STATISTICS.—There are ten million families in France. Of these one-fifth have no children, one-fifth have only one child, and of those who have as many as seven children the number is only two hundred and thirty thousand.

THE Illinois state board of health has elected the following officers for the ensuing year: President, Dr. W. A. Haskell; secretary, Dr. F. W. Reilly; treasurer, Dr. A. L. Clark; auditing committee, Drs. W. R. McKenzie and D. H. Williams.

FIRST DRESSING IN THE FRENCH ARMY.—The French minister of war has issued an order that henceforth every officer and every man in the French army shall, when on active service, carry on his person materials for a first dressing in case of his being wounded.

LONGEVITY IN RUSSIA.—Notwithstanding famine and nihilism, Russia seems to be the land where human life reaches its greatest length. During the year 1891 eight hundred and fifty-eight persons died who had reached ages between one hundred and one hundred and five.

DEATH FROM CARBOLIC ACID.—An unusual case of carbolic acid poisoning occurred in a London hospital. The patient was being visited by a friend, and complaining of thirst, the friend gave her a drink from a basin standing close at hand. This proved to be carbolic lotion and terminated the patient's life.

A BILL, *requiring* that one of the staff of physicians of each of the insane asylums of the state shall be a female, passed the house of delegates of Virginia a few weeks since, but was defeated by a large majority when it reached the senate.

HYGIENE, as it affects the workingman, will receive the consideration of the French labor party at its next annual meeting. The question will be discussed from three stand-points—foods, habitations, and workshops,—eminent sanitarians opening the discussion of each topic.

A DECISION affecting opticians was recently rendered by a court in Harve, France. The judge ruled that an optician who prescribes glasses or tenders advice concerning the eyes violates the law, and is amenable in equal degree as the physician who practices medicine without a diploma.

THE medical society of the county of New York offers a prize of one hundred dollars or a hundred-dollar gold medal for the best essay on any medical or surgical subject written by a member of that society in regular standing, the award to be made at the annual meeting in October.

A NEW SANITARIUM.—Dr. C. C. Yemans, of Detroit, has some idea of starting a sanitarium at Mount Clemens. It is proposed to make it a first-class institution in every respect, and afford patients not only the opportunity of utilizing the healing waters, but of receiving every other medical attention.

ARE CHARITABLE INSTITUTIONS LIABLE FOR DAMAGES.—A ruling on this point was made in a recent suit against a New York hospital. The court held that no action for malpractice can hold against a charitable institution which uses proper care in the selection of competent surgeons to treat its cases.

DR. LOMBROSO, an Italian physician and author of a book treating genius as a pathological condition, is about to form a criminological museum. It is proposed to gather a collection illustrating the mental and physical characteristics of criminals. Skulls, skeletons and brains of criminals, will be systematically studied.

PLAYED-OUT INSTRUMENTS.—It is proposed that all old instruments be collected and given to missionary societies employing medical missionaries, and utilized in surgical operations in distant lands. Just why the inhabitants of Ashantee should not have the advantages of recent ideas as well as other people is not explained.

DR. HUGO SUMMA has resigned his professorship in the Marion Sims medical college at Saint Louis, Missouri. This is the result of a mass meeting held by two hundred and fifty students attending that institution which resolved that the professor was too overbearing in the lecture room and that if he were retained the by faculty they would leave in a body.

DR. ROBERTS BARTHOLOW, the once eminent physician and author of Philadelphia, is now confined as a patient in the Pennsylvania hospital for the insane. Since his retirement from the faculty of Jefferson medical college in 1890, which was the result of an attack of mental alienation, the condition of his mind has been gradually deteriorating and is now completely overthrown.

DIPHTHERITIC CORPSES.—Transportation of diphtheritic corpses is now positively prohibited by the health boards of Pennsylvania, Ohio, Illinois, and Iowa, and railroads going to these states are forbidden to receive the bodies of those who have died with this disease. They are also forbidden to accept corpses of those certified to have died from "heart failure," unless further assured that no contagious disease produced this mode of death.

NEW YORK CITY maintains a farm for its pauper insane. It contains one thousand acres, and was purchased as an experiment during Mayor Edson's administration, for thirty thousand dollars. Four hundred patients, all men, ranging in age from thirty-five to seventy years, now dwell on the premises and are housed in nine one-story pavilions. They work the farm, and conduct a shoe shop, laundry, and blacksmith's shop in addition. It is thought the institution will be self-sustaining in another year.

THE SUICIDES OF PARIS.—There were eight hundred and ninety suicides last year in Paris. Hanging was the favorite route taken to the country from whose bourne no traveler returns. Two hundred and five drowned themselves; one hundred and sixty-four used the carbon furnace—"woke up and found themselves dead;" one hundred and thirty-eight used the pistol; sixty-five jumped from windows. Only thirty-three took poison. The lady suicides mostly preferred drowning and jumping from windows.

JACK FROST IN THE LABORATORY.—Professor Pictet, of Geneva, fourteen years ago reduced hydrogen to a liquid. Since that time he has liquefied sulphurous oxide, and has by the use of intense cold, frozen mercury hard enough to be cast into a tuning-fork and so have its elasticity measured. Glycerine, brandy, and chloroform have recently all been frozen. Purification is said to be made a simple process in these frozen articles. Especially so in chloroform. Pictet finds that pure chloroform is crystalline and far less toxic than the commercially pure article.

THE alumni association recently organized by graduates of the medical department of Harvard university have commemorated the event by holding a banquet. Dr. Oliver Wendell Holmes was one of the invited guests, and the following quotation is from his letter of regret: "I know that the members regard me as a relic of the past—not without a certain value as a fragment of antiquity. In that point of view I am not merely a rarity, I am a unique specimen, and have an adventitious market-price, like one of those rare cents for which collectors pay a premium. Half-worn-out old copper as it is, its scarcity makes it worth a dime or perhaps a dollar."

IN Pennsylvania a physician who prescribes liquor from his own drug store is amenable for breach of the law. In a recent case the judge rendered the following as his interpretation of the law bearing on this point: "Acts of assembly provide that drug stores need not be licensed, but can sell on prescription once, but cannot sell to the prohibited class—minors, drunkards, etc. Where a physician owns a drug store and gives a prescription at his own store for the purpose of selling liquor, he is violating the law. The law abhors subterfuge, and when it gets hold of this class of offenders it punishes them severely. Physicians cannot hide crime behind their diplomas."

THE RESTRICTION OF HYPNOTISM.—A bill has been introduced into the legislature of New York which provides as follows: (1) It shall be unlawful for any person except duly licensed physicians in the course of lectures to medical students or before scientific bodies to give exhibitions of or perform hypnotic demonstrations in public. (2) It shall be unlawful for any person not a duly licensed physician to hypnotize another. (3) Any person violating either of the foregoing provisions of this act shall be guilty of a misdemeanor. (4) This act shall take effect immediately.

A LEGAL decision has recently been rendered in Florida relative to the liability of boards of health. In 1888 the board ordered a bark detained at Pensacola for twelve days, and, by virtue of a general law conferring quarantine powers, required the discharge of ballast, and fumigation of the ship. The owners brought suit for damages against the board of health. The court decided that as boards of health were established for the public good, and as their functions were public, not private, a suit could not be maintained against these corporations for acts of such a nature.

THE Belgian law against hypnotizing, as recently enacted by the parliament of Brussels, is as follows: "(1) Whoever exhibits an individual hypnotized by him or by another shall be punished by imprisonment for a period of from two weeks to two months, and by a fine of five dollars to two hundred dollars. (2) Any person, not a physician, having hypnotized an individual under twenty-one years, or one not in full possession of his mental powers, shall be punished by a fine of five dollars to two hundred dollars, even when the hypnotized individual has not been exhibited publicly. (3) With imprisonment shall be punished, moreover, every person who, with the intention of cheating or otherwise injuring, causes a hypnotized individual to sign a paper containing a contract, disposition, obligation, release, or declaration of intention. The same punishment shall be inflicted also upon the person deriving benefit from such a paper."

THE Belgian society of gynecology and obstetrics, under the patronage of the Belgian government, has taken the initiative in organizing the international periodical congress of gynecology and obstetrics, the first session of which will be held in Brussels, September 14 to 19 inclusive, 1892. Three leading questions will be offered for discussion: (1) Pelvic suppurations; referee, Dr. Paul Segond, Paris; (2) Extra-uterine pregnancy; referee, Dr. A. Martin, Berlin; (3) Placenta prævia; referee, Dr. Berry Hart, Edinburgh. Fees: Members participating in first session, thirty francs. (This will entitle the holder to a copy of the proceedings of the congress.) Founders (life membership), three hundred francs. In connection with the congress there will be an international exposition of instruments and appliances, pertaining to gynecology and obstetrics. All communications pertaining to this congress should be mailed direct to the American secretary, who will promptly furnish all desired information. All notifications to be forwarded should be received by August 1, 1892. Everything points to a great success in this congress. Though notices concerning it have been rather late in this country, already men of celebrity have promised to visit and contribute papers. Many distinguished foreigners have promised to support the enterprise. The American secretary is Dr. F. Henrotin. 353 La Salle street, Chicago, Illinois.

ESTIMATES OF THE DETROIT BOARD OF HEALTH.—The board of health has sent to the controller the following estimates for the maintenance of this department for the ensuing year: Rent of offices, $300; salary of health officer, $3,000; chief clerk, $2,000; clerk, $1,200; disinfector, $900; postage, $30; stationery, $75; printing annual report, $200; printing blanks, $200; rent of telephones, $191; physician for city hospital, $200; engineer to same, $480; expert services, house drains, $200; transportation milk inspector, $300; rent for laboratory, $100; contingent expenses, $124; total, $10,000. The amount is the same as asked for and allowed last year.

ARKANSAS has recently passed the following legislative enactments which bear upon the conduct of physicians practicing in that state, the violation of which warrants the revocation of a license: (1) Procuring or aiding and abetting in the procuring of criminal abortion. (2) Employing or using what are known as cappers, steerers, or drummers, or of the subsidizing of hotels or boarding-houses to procure practice. (3) The obtaining of a fee on the assurance that a manifestly incurable disease can be permanently cured. (4) The wilful betrayal of a professional secret to the detriment of a patron. (5) All advertisements of medical business in which untruthful and improbable statements are made. (6) All advertisements of any medicine or means whereby the monthly periods of women can be regulated or the menses re-established. (7) Conviction of any offense involving moral turpitude. (8) Habitual drunkenness.

DR. FOGELSONG.—Concerning the case of Dr. Fogelsong, of Bronson, Michigan, charged with the murder of his wife, the probate records show the following interesting items: Application was made before the court on August 24 last for the admission of Dr. Fogelsong as an insane person to the asylum at Kalamazoo. The application was filed by his brother, Joseph W. Fogelsong. At the hearing, August 25, Dr. H. P. Mowry and Dr. Levi Sanders, both of Bronson, testified that Dr. Myron P. Fogelsong was insane, with homicidal tendency, and on their testimony the judge of probate issued an order admitting him to the asylum. On December 25 Joseph W. Fogelsong was appointed guardian, and on January 14 he filed a petition to be released from the guardianship. At the hearing on February 1 Dr. Sanders, Joseph W. Fogelsong, Lyman Fogelsong, Alexander Hughes and the doctor himself were sworn and examined, and on their evidence the guardian was discharged. At the recent examination of the doctor, a chemist testified that he found arsenic and strychnine in the internal organs of the wife.

NEW BUILDINGS FOR THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.—The board of trustees and the faculty of the Jefferson medical college have just completed the purchase of two large lots on Broad street, upon which they will proceed to erect a handsome hospital, lecture hall and laboratory building. The estimated cost of the building is five hundred thousand dollars. The hospital will be built not only as a suitable building in which to care for the sick and injured, but will also be provided with a large amphitheatre for clinical lectures. The basement of the hospital will be devoted to the use of the various dispensaries. The building will be fire-proof. By the erection of three commodious buildings the laboratory where delicate work with the microscope will be carried on can be separated from the college hall where didactic lectures are given.

This will be free from any jarring produced by the movement of large classes. With the hospital on one side affording clinical facilities and the laboratories on the other side of the college for scientific research, the college will be favorably situated for imparting thorough instruction in medicine. In addition to these facilities across the street is the Howard hospital and on the adjoining corner the Ridgway branch of the Philadelphia free library, which contains all the scientific works belonging to this wealthy corporation. The new site is more centrally situated than the old one at Tenth and Sansom streets. The removal has been made necessary by the large number of students that are now being instructed in this institution, the faculty desiring to keep the school and hospital in the foremost rank of medical education in this country. The buildings will be ready for occupancy in the session of 1893–1894.

RECENT PUBLICATIONS.

REVIEWS.

TREATISE ON GYNECOLOGY, MEDICAL AND SURGICAL.*

THE American editor of this book states that it is "undoubtedly the best work on gynecology which has appeared for many years in any language,"—and the author himself tells us that it is the outcome of several years practical experience as chief of the hospital service of Lourcine,—of teaching at the Pascal annex of that institution,—of personal observation during visits to many of the leading gynecologists of England, Germany, Austria and France, and of an extensive and careful study of the current literature of the subject.

With such a preamble, one turns to the subject matter of the work with high expectations,—and difficult to please is the critic who is not well satisfied with the results. In the five hundred and sixty-eight pages of text in Volume I, the author takes up antiseptics and anæsthetics, means for wound closure and control of hæmorrhage, and gynecological examinations,—and then goes on to the pathology, diagnosis and treatment of metritis, fibroma and carcinoma uteri, displacements of the uterus, deformities of the cervix, and disorders of menstruation. The pathology of the various disorders under consideration is particularly well described and illustrated,—and in his references to the operative procedures suggested for the relief of these morbid processes, the author shows himself to be a man of broad and liberal spirit. Although tracing the origin of nearly all curative measures to the French school, he frankly admits that operators of other nationalities have advanced, modified, and improved in many instances what his own countrymen have originated or suggested,—and attempts with judicious criticism to point out the most reliable and successful methods. In a work of this kind, which is neither text-book nor encyclopedia, such a course is beset with no inconsiderable difficulty, and many readers might take exception to the elaboration of certain operations, while others, perhaps equally important, are passed over with scant mention. Thus, Schucking's method of vaginal fixation or hysteropexy, which has received much attention and favor-

able criticism in Germany, is described in eight lines with the closing comment that, "In spite of reported successes, this adventurous procedure does not seem to me worthy of recommendation." The flap-splitting operation on the perineum, with which the names of Sanger in Germany and Lawson Tait in England have been associated, and which is coming more and more into favor with the profession in this country, largely as the result of Munde's excellent article,—is mentioned only as a modification in which the Tait-Schroeder-Emmet methods have been combined by Doleris.

But, while many apparent defects similar to the above might be pointed out, the work as a whole is sound, practical and thorough, and can be commended to the specialist and general practitioner alike. The illustrations in the main are excellent,—but it is difficult to understand why the American editor has seen fit to introduce certain plates,—notably those of the gynecological operating-room of Johns Hopkins university. The translation of the work is smooth, and has been carefully edited, and the execution of the publishers' business is all that could be desired. W. P. M.

*By S. Pozzi, M. D., professor Agrege a la faculte de medecine; chirurgien de l'hospital Lourcine-Pascal, Paris; honorary fellow of the American gynecological society. Translated from the French edition under the supervision of, and additions by, Brooks H. Wells, M. D., lecturer on gynecology at the New York polyclinic; fellow of the New York obstetrical society, etc. Two volumes. Wm. Wood & Company, New York.

ESSENTIALS OF PHYSICS.*

THE newest addition to this excellent series of compends is a book of three hundred and thirty pages. It appears to be an admirable compend of the essential facts of physics. The medical student will find it all that his experience with previous numbers of this series would lead him to anticipate.

*By Fred. J. Bookway, M. D. One hundred and fifty-five illustrations. Number XXII, Saunders' question compends. Price, $1.00. W. B. Saunders, Philadelphia.

INSOMNIA AND HYPNOTICS.*

THE authorship of this little book is attributed on the outside cover to Germain See, though claimed on the title-page by E. P. Hurd. The monograph of Germain See was found too brief and too incomplete for the series, it is explained, so the author put his own reflections between the covers. The book is a good compendium of our present knowledge of the therapeutics of insomnia.

*By E. P. Hurd, M. D. Physicians' leisure library series. Paper, 25 cents; cloth, 50 cents. Geo. S. Davis, Detroit.

ADDRESSES AND ESSAYS.*

THIS is a collection of some of the reprints of their versatile author upon a variety of topics. They are all interesting and instructive.

*By G. Frank Lydston, M. D., professor of genito-urinary diseases and syphilology, Chicago college of physicians and surgeons.

ESSENTIALS OF MEDICAL ELECTRICITY.*

THIS is an excellent compend of the leading principles of the science of electricity, as applied to medicine. The descriptions of the primary and most important physical distinctions regarding electro-motive force, current, potential density and resistance are admirable for their clearness and lucidity, and will be valued by students who so often experience great difficulty in grasping these distinctions. The value of the book is further supplemented by the concise yet ample statements regarding the application of the current in diseased conditions. The work is also profusely illustrated.

* By D. D. Stewart, M. D., demonstrator of diseases of the nervous system and chief of the neurological clinic in the Jefferson medical college, and E. S. Lawrance, M. D., chief of the electrical clinic and assistant demonstrator of diseases of the nervous system, Jefferson medical college. With sixty-five illustrations. Published by W. B. Saunders, Philadelphia. 1892. Price, $1.00.

A PRACTICAL RESUME OF THE MODERN METHODS EMPLOYED IN THE TREATMENT OF CHRONIC ARTICULAR OSTITIS OF THE HIP.*

THE author in his preface tells us "that a work of this kind—prepared entirely without prejudice—is deemed a professional necessity at the present time." As the volume, with the exception of a few pages at the end, appears purely a compilation, we must presume that the author's methods are those to which the term professional necessity applies. Upon the value of Dr. Stillman's devices surgeons will doubtless differ. The monograph is a valuable resume of modern methods in the treatment of hip-joint disease.

* By Chas. F. Stillman, M. Sc., M. D., Chicago. Physicians' leisure library series. Geo. S. Davis, Detroit.

THE PRINCIPLES OF BACTERIOLOGY.*

Now that practical bacteriology forms a specific portion of the medical student's labors, there will be a growing call for manuals of the science.

In the book before us the didactic and experimental branches of the science are pleasingly intermingled. Instruction is afforded in all laboratory manipulations, and sterilization, culture media, innoculations, and staining, are all dealt with in a careful and specific manner.

There is no science which has been more actively productive of results than the science of bacteriology, and it is the duty of every American physician to insist upon this branch of research being wisely fathered in the coming years. No college of medicine will be known for such that does not in the next few years provide for teaching bacteriology to its students.

Dr. Abbott's little book is a valuable installment to the armamentarium of the teacher.

* By A. C. Abbott, M. D., first assistant, laboratory of hygiene, university of Pennsylvania. With illustrations. Lea Brothers & Company, publishers, Philadelphia. 1892.

A MANUAL OF AUTOPSIES DESIGNED FOR THE USE OF HOSPITALS FOR THE INSANE AND OTHER PUBLIC INSTITUTIONS.*

THIS would appear to be the hand-book for the neurologist *par excellence*. It is filled with excellent illustrations of the brain areas, and is especially designed for those whose work is among the insane. The value of carefully conducted autopsies in asylum practice is insisted upon. The pathologist will find in these pages copious but concise instructions for conducting an autopsy in a way calculated to produce the best results in knowledge.

* By I. W. Blackburn, M. D., pathologist to the government hospital for the insane, Washington, District of Columbia. P. Blakiston, Son & Company, Philadelphia.

A MANUAL OF OPERATIVE SURGERY.*

THE purpose of this work is thus indicated in the preface: "The present work concerns itself solely with the practical aspects of treatment by operating, with the technical details of operative surgery, and with such part of the surgeon's work as comes within the limits of a handicraft."

Parts I, II, III, are given to the subjects respectively of "general principles," "the administration of anæsthetics," and "the ligature of arteries." The rest of the work is given entirely to the consideration of operations.

In discussing the qualifications of an operator the author aptly says: "A shakiness of hand may be some bar to the success of an operation, but he of a shaky mind is hopeless. In the handling of a sharp instrument in connection with the human body a confusion of the intellect is worse than chorea."

In the choice of operations the author draws chiefly from his own personal experience, which has been a large one. He discusses fairly and intelligently the reasons for a choice of operation and has added not a little to the already well-filled field of text-books on operative surgery. His diagrams are clear and excellent, and paper and print are all that could be desired.

While some quotations are made from American sources it is noted that in the discussion of the radical cure of hernia, McBurney, of New York, who has done not a little in this line of work, is not even mentioned. Altogether the work is most admirable in plan and execution. C. W. H.

* By Frederick Treves, F. R. C. S., surgeon and lecturer on anatomy at the London hospital. In two octavo volumes containing one thousand five hundred and fifty pages, with four hundred and twenty-two original engravings. Complete work: Cloth, $9.00; leather, $11.00. Lea Brothers & Company, publishers, Philadelphia.

REFERENCES.

BOOKS AND PAMPHLETS.

"Tubal and Peritoneal Tuberculosis." By G. M. Edebohls, M. D., New York.

"Fifth Annual Report of the State Board of Health, and Vital Statistics of the Commonwealth of Pennsylvania."

"Treatment of Laryngeal Phthisis." Robert Levy, M. D., Denver. Reprinted from the *Medical and Surgical Reporter*.

MEDICAL PROGRESS.

MEDICINE.

TREATMENT OF PNEUMONIA.

In the *Edinburgh Medical Journal* for November, 1891, Dr. George W. Balfour writes—

(1) There is no true specific for the cure of pneumonia.

(2) That a favorable ratio of recoveries to cases does not indicate any specially curative virtues in the remedy employed, but merely a concatenation of favorable conditions in the cases treated, and this may be either accidental or the result of careful selection.

(3) That the remedy which most deserves our attention is one capable of relieving the most distressing symptoms *tuto, cito, et jucunde.*

This observer thinks that a purge to clear "a dirty tongue" in the early stage of pneumonia is more harmful as a depressant to the heart's action than beneficial to the digestive tract.

There are two conditions to be guarded against: First, excessive consolidation of the lung-substance, and, second, excessive temperature. The latter is especially formidable. When the temperature is not high, consolidation offers no great impediment to the heart's action and can be readily handled.

After trying many ways of treatment he concludes that the sleeplessness, pain, and cough of pneumonia are best met by digitalis and chloral. He gives digitalis as an infusion together with Liebreich's chloral dissolved in it, the dose for an adult being twenty grains of chloral in half an ounce of infusion every four hours. After the first, second, or third dose the chloral could be reduced one-half, continued until the temperature became normal, and then replaced by a tonic. Locally, a jacket-poultice or cotton-wool proves very useful. The diet should be carefully arranged. Under this treatment the crisis is well marked, the heart's action carefully nursed, and the patient made thoroughly comfortable. —*International Medical Magazine.*

THE FUNCTION OF THE HAIR-TUFTS IN MAN.

In the *Journal of Anatomy and Physiology,* Dr. Louis Robinson formulates a theory to account for the persistence in man of the tufts of hair usually present in the axillæ and over the pubes. These he imagines to be the persistent remnants of hair-tufts developed with reference to the clinging or grasping power of the young, and as a means of enabling them to cling to the parent when he or she, as the case might be, was not in a position to spare an arm without much imperiling the chances of escape or rendering movement diffcult. Naturalists have observed that young apes hang beneath the body of the mother and sustain themselves by grasping the hair, and it is stated that certain male gibbons assist in carrying the helpless young. It is an interesting point that in these apes the period of immaturity is prolonged almost as much as in man. Other considerations which Dr. Robinson looks upon as supporting his theory are the appearance

of the hair at puberty, its appearance in both sexes, and the fact that it often appears earlier and more plentifully on the female. It also exists in parts where the young of tree-climbing animals could attach their hands without danger of violent contact from obstacles, and Dr. Robinson has ascertained by measurement that in most cases the situation of the axillary and pubic tufts is within easy reach of the hands and feet of infants when their limbs are extended, if the body of the adult is in the position taken by that of an anthropoid ape in climbing. The theory is no doubt ingenious; but objections to it readily occur. Dr. Robinson considers some of the most obvious of these, such as the existence of similar hair elsewhere and the sensitiveness exhibited by the skin when the hair in those parts is pulled. These, of course, are capable of being explained; but the theory would be very much strengthened if any example could be quoted of an anthropoid ape in which these tufts are actually used in the manner suggested by the author. Their development, if the theory is correct, must have been very much greater in his ancestors than it is in man at the present time to account for their persistence now, not only in the absence of any use for them for so many ages, but actually in spite of very considerable drawbacks to their existence, such as must exist in the friction to which they are exposed.—*Lancet.*

GYNECOLOGY.

METRITIS AS AN INITIAL LESION IN PELVIC DISEASE; ITS COMPLICATIONS AND TREATMENT BY ELECTRICITY.

THE attractive field recently opened to surgical gynecologists by the discovery that the ovaries and tubes may be amputated without invariably resulting in the death of the patient has caused an enormous preponderance of current medical literature to be directed toward diseases of these organs. So great has become the furor that little else is heard at our societies but discussions on the wet specimens thus procured, which are brought in regularly in buckets by certain operators. This singular abundance of pathological material supplied by two organs out of an important group is calculated to make an onlooker who is, fortunately, free from what might be called the operative infection, inquire carefully into its reasons. Granting the peculiarly peccant nature of these organs as a justification, it may be asked why resort should invariably be had to amputation rather than to a more conservative operation. It may be that there is such a thing as a wartime in this work, when, as in military surgery in the field, parts of Nature's handiwork are hastily removed that a more thoughtful conservatism would have restored to health.

But it is not my purpose to discuss at present the debatable questions of the proper management of inflammatory conditions of the ovaries and tubes; they are merely alluded to at this time because it is my conviction that many ovaries and tubes have recently been removed when the real seat of trouble was within the uterus.* In examining for tender spots by the bimanual manipulation it

* The grounds for this conviction are derived primarily from a number of cases of post-operative pain seen in private practice and at the dispensary for women at Fourth and Spruce streets. Many of these cases had enlarged and tender wombs when seen by me, and had either been made worse by the operation or left in an unchanged condition.

is exceedingly difficult to differentiate between a sensitive ovary and a tender uterus, and if one's mind is so constituted that the uterus is entirely ignored, and endometritis or metritis unthought of, a mistake is readily made. One operator declared some two years ago that he did not believe there was such a thing as endometritis. Dragging upon the tender uterus, as he did daily, in his endeavor to find salpingitis, he mistook the purport of the pain excited.

In contrast to this position it may be affirmed that inflammatory conditions of the uterus are the most frequent of all the local diseases of parous women and not unfrequently found in virgins. More significant still, it may be said to be either the precedent condition or the nidus of many of the most formidable diseases in this locality, such as certain displacements, catarrhal salpingitis, pyosalpingitis, ovaritis, cancer of the cervix, fibrosis, and many other lesser troubles. How great, then, is the necessity for its early recognition and prompt treatment!

The classical studies of this disease found in the books are most instructive, though the pathological conditions described in the several varieties of endometritis are of but little clinical use to us, since we do not often study these cases in the dead-house, and as yet but few specimens have been presented at the societies. Whether the case is one of interstitial, follicular, or polypoid endometritis, it is, moreover, of secondary importance in face of the present apparently well-founded belief that they are all examples of that protean diseases of mucous cavities — microbic invasion. The several forms of cervicitis, endocervicitis, endometritis, and interstitial metritis are clinically distinct and largely separable, it is true, but the fact should not be lost sight of that they are all alike microbic in origin, even subinvolution being septic or trauma-septic, and hence are all mere local variations of the same disease.

The recent developments of bacteriology teach us plainly, then, that simple endometritis—a bacterial colonization of the endometrial gland—is the primal step in these progressive conditions. Whether the morbific germ is one of the common staphylococci of pus or some other organism, it seems clear that to its conquest of the local phagocytes is due the hyperæmia, hypersecretion, and hyperplasia of the glandular substance of the endometrium, which, later, extends to other situations by either direct continuity of structure or by lymphatic absorption. The reason for the peculiar susceptibility of the uterine cavity to such invasions is easily conceived when we remember that the intra-uterine mucosa is distinctly glandular—that the endometrium is, in fact, a gland rather than a mucous membrane.

The method by which the uterine cavity becomes the culture-medium of these infections deserves some consideration. On reviewing the conditions present, particularly the ubiquity of pus-germs in the centres of population, one is disposed to ask why an infection of this region is not universal instead of the exception. The natural, healthy mucus and the temperature would seem to be an ever-present invitation. Why, then, are germs normally absent above the internal os, though so abundant below that point? The answer has never yet been given; but it can be none other than that of a body of sentinel phagocytic cells stationed in the cervical cavity to war upon morbific germs. Remove these sentinel cells, or lower their vitality, and the resistance they present is overcome by the outer hordes.

The ineffectiveness of these vital sentinels in puerperal infection is manifest. By a flank movement or brutal charge the seeds of destruction are planted well beyond the lines. An endometritis results, which is the cause rather than the effect of the subinvolution of the muscular fibres. In the nulliparous, and particularly in virgins the method of invasion is not so clear, though we do not have to look far to find it. The prevalence of early stages of metritis—in other words, of endometritis—in perfectly pure virgins is a daily result of my inquiries. At sixteen, seventeen, and particularly between seventeen and twenty-three, in this climate, a uterine leucorrhœa is by no means uncommon in weak and delicate girls; and we do not have to adopt the harsh and generally untrue statement of Schrœder as quoted in the most recent work on this subject, "Pozzi's Gynecology," that the germs are introduced by masturbation. The condition of the general health of these patients is the real causal factor. The germs are always in the cervix normally unless the hymen be imperforate, and they are enabled to penetrate within the uterine cavity by reason of weakness on the part of the sentinel cells. A girl whose blood is impoverished by inherited weakness, to which is added the many imperfections in our methods of fashionable education, is in but a poor condition to marshal sentinels and defences against any morbific attack. The logic of this view is sustained by the methods of many rational physicians in dealing with this condition in such cases. Let the blood-making organs once be restored to health, and the invaders, *if not too deeply intrenched*, will be driven out.

At its inception this affection is usually subacute, if we except the more virulent forms of puerperal metritis, and runs its course without material disturbances of temperature, like the analogous affections of the nasal cavity. Even after the disease has extended so far as the Fallopian tubes, with the production of muco-purulent accumulations, the temperature may still be normal. In my experience an acute stage is lacking, the onward march of the affection being as insidious as it is gradual. Beginning as an endometritis or endocervicitis, the patient is only conscious at first of a leucorrhœa which becomes more abundant and irritating to the vagina and vulva, and should be the sign for active and intelligent interference on the part of her physician, though of late a do-nothing policy has been advocated by some. It has been said by an eminent authority that the womb has its natural secretions, like the nose. This is, of course, true, but it should be remembered that the nasal secretion is not normally muco-purulent; as soon as pus-corpuscles habitually occur in either secretion, the existence of a diseased condition is manifestly proven.

The subsequent stages and the effects of this catarrhal endometritis are natural consequences. Accompanying the hypertrophy of the endometrium into fungoid and cryptose conditions we have a direct stimulation of the connective-cells of the parenchyma. Trophic changes in this situation and general fibrosis of the body of the uterus result. Coincidentally, or at a later period, an extension upward along the mucous tract occurs, and salpingitis, ovaritis, or both, add their burdens to the suffering woman. I shall not recount the local symptoms of this conglomerate affection beyond the statement that at various periods in its course we find changes in the quantity and quality of the secretions, erosion of the os from irritating discharges, hypertrophy and tenderness of the cervix and corpus, combined with a reasonable movability of the uterus as a whole.

With these facts you are all familiar. On the reflex symptoms some doubt has been thrown of late, but the best proof that pains down the limbs, in the abdomen, and in the back, with or without nervous prostration, are caused by this "irritable" uterus is given by the disappearance of such symptoms as a result of local treatment. The reason for the doubt lies in the lack of neurological training in many gynecologists, who have mistakenly treated such diseases as hysteria, neuralgia, lateral sclerosis, and locomotor ataxia as mere nervous manifestations of pelvic disease. I have elsewhere reported an instance of removal of the ovaries for pains that were due to an aggravated spastic condition; and the physicians that follow my service at the Spruce street dispensary recently saw an even more ludicrous error of a well-known colleague: A woman applied for the relief of a pain in the side in the region of the floating ribs, making the statement that she had been under treatment for it at a neighboring dispensary for several years. The treatment had been directed entirely to the pelvic organs, and much pressure had been unsuccessfully brought to bear on her to consent to a removal of the ovaries. In spite of this treatment her pain was somewhat worse. In glancing at her back I was led to request that the corsets be removed, which revealed a most marked case of scoliosis, with cork-screw twist of the vertebræ. A properly fitting brace gave her complete relief from pain. Even a slight acquaintance with orthopædics would not hurt gynecologists; an elementary training in neurology is certainly essential to correct diagnoses in this specialty.

Besides errors of diagnosis it is possible that the present tendency to minimize the effect of uterine disease in causing backache and other neuroses is due to the failure to cure such conditions by removing scar-tissue from the cervix. Failing to cure these cases by cutting out this harmless reparative effort of nature and by removal of the appendages, the remainder of the woman is kept in bed for long periods of time under the theory that the rest-cure was the proper thing after all and that rest was the most essential part of the rest-cure.

Clinical proof of the dissipation of these baneful symptoms by the use of means that combat the initial microbic affection and its nutritional and hypertrophic consequences is the best proof of their correlation.

A recent case will, I think, present this proof in a strong light. A healthy young lady fell a short distance from a hammock, striking the end of the spine. She suffered immediate pain, and two weeks later applied to an intelligent gynecologist, who treated her for retroversion, and later for inflammation of the ovaries, so far as could be ascertained from the patient. After some early relief the condition became stationery. At this time the case was seen in consultation by Dr. Baer, of this city, with a view to removal of the appendages, which was, however, not done for some reason. Sixteen months after the beginning of the disease the patient entered my private sanitarium in the following condition. Subjective symptoms: continuous, deep-seated scratching pain about an inch and a half above each ovary; a tender pain in the sacrum, and an inability to walk more than two squares without an intensification of these symptoms and great prostration. Objective symptoms: external evidences of perfect health, marred only by coldness of the extremities. Internal examination showed considerable leucorrhœa; uterus apparently small and in a normal position, but when elevated on the finger in the posterior cul-de-sac extremely painful. Thinking

the case one of posterior parametritis or ovaritis, she was treated by the vaginal galvanic method, in conjunction with general electricity and massage for the incipient nervous prostration that was becoming manifest. A considerable improvement resulted, but no headway was made with the peculiar pain in the ovarian regions until it was recalled that nothing had been done directly for the endometritis. The sound, now passed for the first time, showed that the apparently small uterus had a cavity exceeding three inches. An intra-uterine positive application was therefore made, of a strength of twenty milliamperes, and this had the happy effect of checking the so-called ovarian pain permanently. Four subsequent applications of the same kind were made for the control of the discharge and the patient was restored to health and has remained well, now for some time.

This patient had been kept for three months on a lounge by her previous attendant under the theory that this supposed essential of what is called the rest-cure would be of service. Shorn of its institutional control and electricity this fashionable mode of treatment is a two-edged sword that is responsible for more than one case of chronic invalidism. Used with such essentials, including direct electrical applications to the uterus in the class under consideration, these cases in the borderland between the domains of gynecology and neurology may be permanently restored to health, though he who essays but one part of the treatment will meet with frequent failure and disappointment.

For therapeutic purposes cases of chronic metritis are divisible into two classes that much resemble the divisions made by the late George M. Beard in cases of sexual neurasthenia in the male. 'In the one class the affection occurs as a purely local disease, the nervous organization of the individual being so robust that it fails to become affected by the local disturbance; in the other class a far less degree of local trouble may be found associated with profound depression and disorder of the nervous system—a disorder that seems greatly disproportioned to the local disease.

The treatment of the first class of cases is naturally entirely local, and may generally be carried out in the office, when the disease has not yet ascended to the tubes and ovaries. Various modes of treatment have been efficaciously employed, though many are now abandoned as either ineffective or dangerous. I shall limit my remarks to the local use of electricity, first prominently brought forward by Apostoli, whose conclusions have been more than confirmed by my own experience. As in other subacute microbic affections of the glandular membranes, the galvanic current presents a typical alterative action which may be brought to bear directly upon the diseased surface, and by means of applicators that are in themselves innocuous because elastic, easily inserted, and lacking the dangerous piston action of the cotton swab. The contrast with acids or other caustics that must be inserted by force is very great; no hooking or pulling on the cervix or other harsh methods are necessary, and the local action is, moreover, strictly mensurable and controllable. By reason of its greater antiseptic effect the positive pole is usually preferable, though in the later stages of the disease, when the endometritis has eventuated in a hyperplasia, the galvanic alternative method is better than the use of a single active pole. In subinvolution, particularly, the alternative galvanic method within the uterus is quickly curative, accompanied at each treatment by a primary faradic application.

Judging from results, the local electrical treatment seems to act in a threefold manner, each special element of the method varying in usefulness in different cases. One part of the action is a local alterative effect on the endometrium, another results in a quickened absorption of hyperplastic tissue, and still another in stimulation of the muscular fibres to immediate contraction and increased tone. The first action is most important in fungous and hæmorrhagic cases; hence, the positive pole should be used alone, with a duration of some minutes at each application. As the possibility of causing an immediate increase of muscular tone in the uterus increases, the alternative method becomes more valuable, and in recent subinvolution the faradic current alone is usually sufficient.

If, at the initial examination of a case, a reasonable doubt is present as to the preponderance at that time of the original metritic trouble or of a secondary extension into the tubes and ovaries, the intra-uterine method should be preceded by a more or less prolonged vagino-abdominal galvanic treatment; and in these cases, as well as in the second class here described in which the nervous system is affected, the value of institutional treatment is enormous. By a combination of internal and external electrical treatment, massage, diet, and partial rest, these cases can be almost invariably restored to health, unless pus-cavities have formed—an event that is much rarer than some would have us believe. It may take weeks to accomplish these results, it is true; but it is also true that it takes years for the patient to recover health after the performance of a castrating operation.—G. Betton Massey, M. D., in *Cincinnati Lancet-Clinic.*

OBSTETRICS.

RESTRICTED DIET VERSUS PREMATURE LABOR IN CONTRACTED PELVIS.

Dr. Prochownick has been discussing (*British Medical Journal*) the questionable procedure of inducing premature labor in cases of contracted pelvis, and reports three successful cases in which the necessity for premature delivery was averted by controlling the diet during gestation. The principle of the dietary consists in the restriction of the quantity of fats ingested and stored away by the mother or the fœtus, much upon the plan pursued in the treatment of obesity. The prohibited articles are chiefly fluids, sugar, and starch. This diet only slightly reduces the strength of the mother, and does not appear prejudicial to the child in the experience thus far reported. Dr. Prochownick considers that a thin child, born at full term, has a better chance of living than a plumper infant born prematurely. The exposure to air at the seventh month, and the subsequent artificial feeding, involve far greater risks than the proposed reduced nutrition during two months longer residence in utero, and the golden admonition is recalled that triumph only is perfect when the child as well as the mother is saved. The paper does not state what influence this course exerted upon the formation of the bones of the child's head and the effect upon their delivery. The narrowest conjugate diameter of the pelvis in three cases of successful delivery was three and ninety-four-hundredths (nearly four) inches.

THERAPEUTICS.

THERAPEUTICS OF DIPHTHERIA.

PROFESSOR STRUBING, of the University of Greifswold, discusses the therapeutics of diphtheria in the *Deutsche Medicinische Wochenschrift*, November 26, 1891. He believes that the exudative process in the throat may be due to a streptococcus, in which case the disease is pseudo-diphtheria, or to the bacillus of Loffler, in which case the disease is true diphtheria. He admits that in the early stages it is impossible to tell one from the other, except through bacteriological examination.

As Loffler stated in his first work, three things are demanded,—first, to influence the vitality of the bacilli and to check their further growth; by this means the further production of material injurious to the organism would be hindered; second, to destroy the effect of the poison which has already entered the organism; and, finally, to check the invasion of other organisms, and, in case this has already occurred, to remove their effect.

For local treatment, Strubing has employed alternately an alcoholic iodine-carbolic acid solution—*liquor ferri sesquichloridi* and sulphur. The throat is to be carefully cleansed with abundant gargles, diluted lime-water generally having the preference when the nasal passages are affected; these should be cleansed also. Inhalations take the place of gargling, especially in small children. Internally, Strubing gives hourly a teaspoonful of a solution of the cyanide of mercury of a strength of one-sixth of a grain to three fluidounces. Strubing has tested in practice the results of Loffler's bacteriological investigations. As the most certain measure he always employs a combination of oil of turpentine (ten and one-half fluidrachms), corbolic acid (forty-five minims to seventy-five minims), and absolute alcohol (two fluidounces). This was applied to the diseased surfaces upon absorbent cotton every four, six, or eight hours. Besides, in suitable cases, a mixture of carbolic acid (forty-five grains), alcohol (one fluidounce), distilled water (two fluidounces to two drachms), was used as a gargle. Adults were directed to use a teaspoonful, and children a small teaspoonful, as a gargle, every four to eight hours, and to hold it in the throat, if possible, for ten or fifteen seconds. Both solutions are disagreeable, especially on account of the alcohol. Adults are more likely to object to them than children. The dangers of carbolic acid poisoning can be guarded against by watching the urine. Without waiting for the appearance of the olive-green color of the urine, it is time to lessen the frequency of the carbolic acid gargling when the urine gives an intense reaction with *liquor ferri sesquichloridi;* a slight reaction demands no consideration. The slightest toxic albuminuria would naturally cause the suspension of the treatment. In order still more to meet the dangers of poisoning, the patients should take internally, at the same time that they are using the carbolic acid, small doses of sulphate of sodium, in doses to be determined by the effect of the salt upon the bowel. Gargles of carbolic acid were not employed until it had been proved by trial with salt-water or lime-water that the patient was able to gargle well, and so avoid the danger of swallowing the fluid. There is room for the utmost care in this respect, especially in the case of children.—*Therapeutic Gazette.*

PEDIATRICS.

TREATMENT OF THE CAUSES OF LIMPING.

SIMON states (*Arch f. Kinderh.*, XII, 5 and 6) that one of the commonest and most important causes of lameness in children is coxitis. It calls for attention at the beginning while it is still an arthritis and before there is tumor albus, abscess, or luxation of the head of the femur. Treatment should be general and local, the former having especial reference to general disease like scrofula, and consisting in the use of tonics and stimulants, cod-liver oil during the winter, and phosphate of lime. The local treatment consists primarily in immobilization, and whatever form of apparatus is used this must be a primary consideration. The author approves of the extension apparatus of Guersant, which is provided with weights for overcoming muscular contraction. It is sometimes necessary to use chloroform anæsthesia as an assistant to the apparatus in overcoming this contraction. The Guersant apparatus allows one to make the necessary inspection of the diseased joint and to use the necessary local means. If the leg has no defective position it is well to use that form of Guersant's apparatus which fixes the pelvis and the trochanter completely. Verneuil's and Bonnet's apparatuses are also recommended, though the expense of the latter may be considered an objection to it. If the disease has lasted a long time, and the leg is in a vicious position, with or without ankylosis, re-dressment under chloroform anæsthesia is indicated, and then immobilization if inflammatory conditions have disappeared. Abscesses should be opened and treated with iodoform-ether. If healing has advanced so far that a relapse into a bad position is not to be feared, the immovable apparatus may be replaced by a movable one. After one to three years healing will usually be so far advanced that the patient can go about on crutches. Since relapses are to be feared, one must not begin to lay aside supporting apparatus until ankylosis of the joint in a good position has occurred. Coxitis is one of the most deceptive of diseases, and almost alway ends with shortening of the leg to a greater or less extent. Another cause of lameness consists in congenital luxation of the hip-joint. This is usually incomplete and increases by degrees. By using suitable apparatus the destructive process in the head of the femur may be retarded. Arthritis of the knee and ankle-joints may be treated at first with revulsives, vesicants, and immobilization. Internally one may give salicylate of soda in the acute stage, and in chronic cases tincture of colchicum in five to ten-drop doses, suspending its use for a time after eight or ten days. Tonics must also be employed, also massage and weak currents of electricity. Passive movents of the joint should also be practiced to prevent stiffness. If there is periostitis or small abscess, one may inject iodoform ether; if there are large abscesses, curetting under the most careful antisepsis is advisable. If there is inflammation of the trochanter, immobilization is of first importance, and then one may use revulsives or actual cautery, burning even to the bone. To relieve the pain one may give belladonna and hyoscyamus, the limb being enveloped in cotton.

Another cause of lameness is infantile paralysis. Should it begin with fever, the treatment should first consist in derivatives, such as flying blisters and the actual cautery, then hot-air baths to cause profuse sweating. At night one may

give chloral, and during the day aconite and nux vomica in doses of ten drops or less. When the febrile period is over the galvanic current may be used every three days for ten minutes at a time. Carefully regulated gymnastic exercises will also be of service, also sulphur baths, salt baths, and tonics—especially nux vomica.

In paralysis from brain lesion electricity is not indicated. One must lessen rather than increase the excitement of the nervous system. If the brain lesion is of syphilitic origin, iodide of potash should be used. If there is sclerosis of the brain, bromide of potash and iodine may be given in combination. All excitement must be avoided, and the treatment be directed to the lesion which is the fundamental cause of the lameness.—*American Journal of Medical Sciences.*

MEDICAL MELANGE.

LACTATE of STRONTIUM is a new remedy for albuminuria. Dose—eight grains.

BUTYL-CHLORAL FOR FACIAL NEURALGIA.—Butyl-chloral has been proved to have an especial action on the facial or trigeminal nerve. Given internally in doses from one to three grains, it has a marked effect in relieving painful neuralgias of this nerve. Professor Liebreich, of Berlin, prescribes it as follows:

℞ Butyl-chloral, ... gr. xl. to lxxv.
Alcohol. rect., ... f℥ iiss.
Glycerini, ... f℥v.
Aquæ dest, ... q. s., ad. f℥iv.
Misce. Signa.—From two to four teaspoonfuls p. r. n.

INCENDIARISM COMMITTED THROUGH HYPNOTIC INFLUENCE.—In the *Bulletin General de Therapeutique*, Professor Auguste Voisin describes an interesting case of a young woman who, under an hypnotic suggestion, committed acts of a criminal character, thus fortifying the position taken by the Nancy school in the famous Eyraud trial as against the school of the Salpetriere. The conclusions arrived at by Professor Voisin are: That the individual may, under the influence of an hypnotic suggestion, commit a criminal act. Secondly, that the judge possesses, in this same hypnotism, the means of recognizing the true criminal. He can distinguish between the evil spirit who incites the crime and the innocent hand which enacts the deed.—*Journal of Nervous and Mental Diseases.*

AT the stated meeting of the medical society of the county of New York, on Monday, January 25, 1892, the subject for discussion was the epidemic of influenza. The discussion was opened by Dr. Janeway, and after addresses by Drs. Jackson, Draper, and Robinson, Dr. Francis Delafield addressed the society on the treatment of influenza. He stated as follows: The treatment consisted of putting the patiene to bed, and seeing that he was well nursed and had proper diet, while the disease was running its course. It was possible, however, for the physician to interfere with advantage, in the case of certain complications. Of all the remedies suggested for the treatment of influenza and its complications, such as severe headache or neuralgic pains, etc., he had found nothing so reliable as phenacetine in doses of five grains every two hours. The catarrhal throat trouble, which is often present, he had treated successfully with aconite or salicylate of soda, with a solution of cocaine locally.—*Medical Record.*

MORPHINE IN INSANITY.—According to Voisin morphine is a drug that is especially useful in a number of forms in insanity and its dangers have perhaps been a little exaggerated. It is especially against the element of pain that it is of value, and it is possible that too little account is taken of the complaints of patients, especially in hypochondriacal cases. It should be kept in mind that there is often a real basis for many of these complaints and that imagination is not altogether in fault.—*American Journal of Insanity.*

"MISSED ABORTION."—Cholmogoroff (*Zeitschrift fur Geburtshulfe und Gynakologie*, Band XXII., Heft 2) reports two cases of missed abortion which were remarkable for the length of time during which the ovum was retained. In the first of these cases the life of the embryo persisted for four months, while the product of conception was retained for seven months after the death of the embryo. The entire pregnancy persisted for eleven months. In the second case the embryo perished at three months, but was retained for two months after death in the uterus. In neither case was operative interference indicated; the patients were kept under observation, and the expulsion of the ovum followed spontaneously. Both patients made uninterrupted recoveries.—*American Journal of Medical Sciences.*

ALEXANDER DUKE (*Centralblatt fur Gynecologie*) has proposed, in rupture of the perineum, an operation consisting of a transverse incision across the perineum, between the posterior end of the rupture and the anus, carrying the incision upward between the rectum and the vagina until the mucous membrane of the posterior vaginal wall is reached. This is easily accomplished if the left index finger is placed in the rectum as a guide. This incision is now brought into apposition from side to side laterally, with wire sutures, thus approximating the opposite ends of the incision in the middle of the perineum. It is easy to see that in this way a powerful perineum is formed; and if for any reason the operation should not be entirely successful, as no tissue has been removed, any of the other operations for restoration of the perineal body can be undertaken after this operation as easily as before. Duke, however, reports that he has never seen failure of the operation, and healing goes on rapidly and painlessly to complete union of the transposed tissues.—*Annals of Gynecology.*

COMMERCIAL MEMORANDA.

PRURITUS ANI.—Dr. Joseph M. Matthews has obtained excellent results from:

℞ Benz. oxide zinc oint.,
Campho-phenique, ... aa ℥ss.
Misce. Apply as often as necessary.

The campho-phenique may likewise be used pure, without detriment to skin or mucous membrane.—*Medical Bulletin.*

THE successful treatment of certain female diseases requires the insertion of a medicated vaginal tampon, and the Aderson vaginal capsule affords an excellent medium for facilitating this work. As these capsules prevent the loss of any medicament during insertion they possess the advantage of retaining the full strength of the ingredients employed, while the annoyance of exposure or soiling of linen is avoided by the patient.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

SOME OF THE LIMITATIONS OF MEDICAL KNOWLEDGE.*

By CHARLES G. JENNINGS, M. D., Detroit, Michigan.

PROFESSOR OF PHYSIOLOGY AND DISEASES OF CHILDREN IN THE DETROIT COLLEGE OF MEDICINE.

In sending forth a class of young medical men the faculty and trustees of this college acutely feel the double responsibility imposed upon them: first, their re-ponsibility to the community which depends upon them to thoroughly instruct the students in the science and art of medicine, that it may with confidence intrust its most precious interests to their care, and, second, its responsibility to the student who has asked from them the knowledge which will ensure him a successful career in his chosen profession.

Our state places no restrictions on the practice of medicine. It assumes the astounding position that rigid educational restrictions shall protect the people from ignorant practitioners of the luxurious and æsthetic specialty of dentistry, while it leaves open to the vicious and unqualified the health-preserving and life-saving practice of general medicine and surgery. It demands evidence of abundant education from the pharmacist, one of whose functions it is to carry out instructions from the physician, yet it does not ask from the physician himself the possession of the simplest fact of medical knowledge. Until the people can be aroused to the necessity of demanding from those desiring to practice medicine, evidence of the possession of a proper medical education, it will be left entirely to the honor of a medical college what standard of excellence it shall demand of its graduates. Our responsibility, therefore, is a moral one.

To-night we surrender to the community the class which for three years has been under our instruction, and we hope that the future careers of its members will prove that we have done our duty both to them and to the community.

It is customary upon the severance of our relations as teacher and student, publicly to address the graduates, and to bestow upon them, as students, a part-

*An address to the graduating class of the Detroit college of medicine.

ing benediction, and to bid them, as physicians, a cheery welcome to the honors and trials of an exacting profession. To the faculty this is but an oft-recurring incident; to the graduates it is a long looked-for event, and one which will linger in their memories late into the twilight of their lives.

We recognize that our work as teachers is done. What we shall have to say in parting will not be the words of teacher to student, but rather the counsel of the experienced to the inexperienced physician. We have asked the public to be present and to profit, if it can, by our counsel. Indeed we may call this meeting a consultation, but differing from the ordinary consultation, in that we admit the public to our confidence. Perhaps our guests, unaccustomed to such distinguished consideration from the profession, may doubt our sincerity; they may fear us even bearing gifts, as the Trojans did the Greeks. They may be assured, however, that whatever is said that treats of our mutual relations will be said frankly and without mental reserve.

During his college life the student is intent upon storing his mind with the accepted facts and well-tried theories of medicine. The field is so vast, and his mental vision so myopic, that he can see no limit to the extent of medical knowledge. But a short excursion into the domain of practical medicine will bring him face to face with boundaries he cannot pass; some of the most trying moments of his career as a physician will be those imposed upon him by the limitations of his art. To console the young practitioner in the insoluble perplexities which he will surely encounter, and to aid the community more fully to realize some of the difficulties which beset the practice of medicine, I shall briefly discuss "some of the limitations of medical knowledge."

All positive human knowledge is limited by human experience. Speculation may build theories beyond the boundaries of demonstrated fact, and these appear at a distance to correspond with clearly outlined objects, but on near approach. like the fleeting mirage they fade to nothingness. In no department of science is the tendency to substitute speculation for demonstration so great as in medicine. Here accurate experiment is baffled at almost every point by insurmountable obstacles, and it has been the oft-repeated history of medical theories, that the experimenter wearied with his reverses, has at length been forced to build a flimsy, speculative superstructure upon a weak foundation of partly-demonstrated facts. Pure science does not bewail its ignorance; it rather congratulates itself upon its achievements. While it accepts with philosophical resignation the limits physical conditions place upon it, it looks hopefully beyond the elastic boundaries which the wisdom of the times has drawn around it. The highly-trained scientific mind accepts the present limitations of medical knowledge with the same resignation and hope; but the masses, to whom medicine is a curious mixture of superstition and science, do not apprehend these limitations. The problems medicine has to solve for them bear so closely upon their affections, that the impatient and unreasonable demands of sentiment too often replace calm judgment, and the medical profession is thoughtlessly criticized for ignorance of subjects that are now, and in all probability always will be, beyond human comprehension. No one thinks of censuring the engineer for his inability to build bridges without supports, or the astronomer for his lack of knowledge of the daily habits of the man in the moon, yet we hear every-day criticisms of members of the medical profession equally as ridiculous and unjust.

Medicine is not and never can be an exact science. Internal medicine, which comprises the great bulk of medical practice, deals with microscopic changes of structure and occult disturbances of function in inaccessible organs whose physiology is but imperfectly known. Many of its problems may remain forever unsolved. Surgery, which has to do with gross and visible changes of tissues and organs, and some other departments of medicine, may approximate more closely to precision; but it matters not how perfect may become the knowledge of disease—its pathology, its natural history, its treatment—there always will remain that unknown, unstable and unintelligible factor, the patient.

Individuals differ in their physiology as in their physiognomy. No general knowledge of physiology, however perfect, can always tell us the minute individual peculiarities which determine what reaction will result from the most perfectly known internal or external disturbing influence. The uncertainties of diagnosis can never be eliminated. The initial identity of many acute diseases, for a few hours or days, defies differentiation; while the obscurity of chronic maladies will often resist the keenest scrutiny of the most accomplished clinician, armed with all the resources of his art. Diagnosis, then, must remain oftentimes a question of probabilities. Lawson Tait, whose remarkable experience and skill in abdominal surgery have been rarely equalled, ventures upon a positive diagnosis of abdominal disease only after he has opened the abdomen and looked in.

Therapeutics, the great aim and object of all other medical knowledge, is still the most uncertain of its branches. Its domain abounds in pitfalls, and many of its darkest recesses are illumined only by an *ignis fatuus*. Nature, that "benevolent old hypocrite," as Dr. Holmes calls her, seems kindly to have endowed the human mind with a credulity that expands as the necessity for it grows. Credulity acts as a sort of antidote to ignorance. It enables humanity not only to endure its ignorance with resignation, but to look upon it with real pleasure.

To the inexact science of therapeutics, therefore, we should look for the greatest fallacies and the most ridiculous superstitions. Some of the most pathetic examples of the gullibility of the human race are found in the history of the rise and fall of absurd systems of therapeutics, and in the transient popularity of fantastic remedies. As Cullen well said, "Neither the acutest genius nor the soundest judgment will avail in judging of a particular science in regard to which they have not been exercised." Great and good Bishop Berkeley, of whom even a carping writer said, "So much understanding, so much knowledge, so much innocence and such humility, I did not think had been the portion of any but angels," discovered that precious fluid, "tar water," which he recommended for averting and curing all manner of diseases. The wise Lord Bacon believed in the "weapon ointment;" and in the early part of this century the "metallic tractors" of Perkins were endorsed by thousands of the most eminent people of this country and Europe. The more modern instances of "blue glass," "faith cure" and its congeners are familiar to you all.

We all can smile at the demonstrated absurdities of past fallacies of therapeutics, but the credulity of yesterday lingers to-day in the public mind; and it is difficult to find individuals who are not influenced with more or less readiness by the superstitions of therapeutics. No doubt every person here to-night would smile at the mention of the fetish-worship of the simple African. I shall be too.

considerate to ask how many of you carry about, wrinkled by age to the semblance of wisdom, an innocent horse-chestnut; or how many fair hands have their beauty marred by a hideous magnetic ring; or how many, among the more opulent have toyed with the pretentious, pseudo-scientific electropoise. I shall ask, however, in all honesty, how far is all this removed from fetish-worship?

It would indeed be remarkable if the members of the medical profession, who are but men and women, and who have nearly all the frailties of the rest of humanity, did not occasionally resort to credulity as an antidote to their ignorance. With all humility it must be confessed that the professional history of therapeutics tells us of specifics for rheumatism, cancer, consumption and all sorts of incurable and benign diseases,—specifics which have waxed and waned and been forgotten. But a few months ago the whole civilized world was talking of Koch and his specific. Never in the history of medical discovery has such credence been given by the profession to a new remedial agent. The eminence of the discoverer in strictly scientific medicine, and his cautious and rare analytical mind, were taken as guarantee of the correctness of his observations; but all are familiar with the overwhelming evidence which quickly shattered our hopes and left the treatment of tuberculosis where Koch had found it. This is but one example of the ease with which, in times of weakness and when scientific skepticism is off its guard, the inborn credulity of a scientific mind may overpower its well-trained judgment. When such minds, earnestly searching after truth, can be led into error, great indeed must be the difficulties which attend the solution of medical problems. We cannot now consider all these difficulties, chief among which are the fickle course of disease and the self-limitation to which it is subject. It has been said that about ninety per cent. of the diseases which the physician meets in ordinary practice are self-limited, and the patients if left to themselves and not too seriously interfered with, would, in a longer or shorter time recover. Upon the confusion of therapeutic causes with these natural effects whole systems of therapeutics have been founded; and few persons will be met with who, from this same confusion, do not think that fate has confided to them one or more great therapeutic truths. With this hard-earned knowledge of the fallacies of medical evidence, is it any wonder that the physician accepts these alleged truths with the classical grain of salt? Is it remarkable that he is apt to look blankly over the shoulder of the credulous dame, and wonder how near dinner-time it is, when she is telling him in strict confidence of her great success in the treatment of cerebro-spinal meningitis with tincture of bees-wax?

It is only by repeated observations by acute minds, trained by large experience in all the habits and vagaries of disease-processes, that the errors of medical evidence can be eliminated.

To the honor of the medical profession it can be said that rarely has a reputable member of it, by keeping secret his discoveries or patenting his inventions, limited the dissemination of medical knowledge for his own pecuniary benefit. The public does not, I think, appreciate the necessity for this community of medical knowledge, and many harsh criticisms have been cast at the medical profession for its repudiation of secret remedies and methods of treatment. People forget that they themselves are first benefited by discoveries in medicine; and by the wide dissemination of these discoveries. The health and lives of some of you may depend, to-morrow, upon the application by your physicians o

medical facts learned yesterday in New York, in London, or in Vienna. Could you countenance the venal spirit that would withhold that knowledge for personal gain? And, let me ask, would your physician or you be the sufferer by that secrecy?

Had Sir Joseph Lister kept secret his discoveries, and had sold the right to practice antiseptic surgery to "Lister institutes," he would to-day have been the richest man in the world. But would you be willing to keep from humanity the blessings of antiseptic surgery that a few men might be made enormously wealthy? Again, the methods of Lister were crude and cumbersome, and in the hands of the few might long have remained so. By its publication to the world, and the concentration of thousands of brilliant minds upon antiseptic surgery, its technique has become so simplified and refined that to-day a surgical operation is a work of art.

Publicity not only amplifies scientific truths, but quickly discloses error. In a few weeks' time the medical profession demonstrated that Koch was mistaken in his lymph. Had he pursued the methods of the unscrupulous, a credulous public, at great inconvenience and expense, would still be asking of him relief he could not grant.

Unrestricted secrecy would mean the arrest of progress in medical science. The public should well consider how it fosters by its support a spirit that would compel the physician to put a royalty-stamp on his patient's back before he administered chloroform or gave a hypodermic injection; and the public press does wrong when it lends its aid to such venality.

And further, the past has proved and the future will confirm the rule that, in medicine, secrecy is the cloak of fraud. Medicine has no mysteries. It freely tells all its wisdom, and frankly acknowledges all the limitations of its knowledge. All it asks in return is that the people shall discountenance the pretenders who play upon their innocence and pilfer their purses.

Gentlemen of the graduating class, it is unnecessary for me to admonish you that sobriety, industry and perseverance will be requisite to your future success. These are the virtues necessary to success in every walk of life. You have chosen the most exacting of callings; one that imposes upon you gravest responsibilities, and most harassing cares. In medicine incompetence or carelessness entail losses which cannot be computed. To do fully your duty you must practice virtues beyond those of ordinary men. You must have no ambitions beyond your profession. "The great practitioners are those who concentrate all their powers on their business." You must sacrifice even science to the welfare of your patients. If you wish to dabble in experimental medicine you should cease to be a general practitioner. Leave experimental medicine to those who have the time and the opportunity for its pursuit. It is their function to perform, it is yours to criticise and test laboratory work. While we may admire the scientific spirit and self-sacrifice that wrung from John Hunter the exclamation, "Well, I suppose I must go out and earn that damned guinea," we cannot but have the profoundest sympathy for his poor patient.

No one mind can store up all the wisdom of medicine. No length or variety of experience will compensate for the study of the experience of others. The anomalies of medicine require side-lights from every quarter to enable one fully to comprehend them. Brilliant men in special fields of research and prac-

tice have pushed forward the limitations of medical knowledge until it is the mental work of a lifetime to master the details of a single specialty. Opportunity or special ability may turn the energies of some of you to the pursuit of these special departments of practice, but the fortune of most of you will be the broader and more arduous field of general practice. As Dr. Holmes well says, "The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins." You have but half learned the business of your profession until you thoroughly know when your duty as a general practitioner ends, and that of the specialist begins.

The pursuit of the science of medicine demands only technical knowledge; the practice of the art of medicine demands at least an insight into all branches of wisdom. The successful practitioner must also possess inborn qualities which attract and keep the affections of men. His career is a succession of personal interviews, in times of bodily and mental suffering, when human nature shows its weakest parts. He must have abundant charity for human frailties, tender sympathy for human misfortunes, and the power delicately, by word and deed, to express these emotions. Fortunate indeed is he among you who, to a scientific mind, and the genius of observation, can add a spiritual insight into the disordered body and mind of man.

Wise old Socrates once said, "How I wish that wisdom could be infused by touch out of the fuller man into the emptier man, like water which is poured through wool out of a fuller vessel into an emptier one." To-night we echo the wish of Socrates; could we do so we would pour into you medical wisdom, erudition and experience from the faculty until you overflowed. But this generous wish is as vain to-day as it was two thousand years ago. What wisdom you henceforth obtain must be the result of your own study, observation and experience. Let no opportunity be lost. With your minds filled to their fullest capacity with medical knowledge, your hearts quickly respondent to the frailties and sufferings of humanity, your whole energies devoted to your own mental advancement and the physical welfare of your patients, you will not have to look long for success in your chosen profession.

THE SURGICAL TREATMENT OF BACKWARD DISPLACEMENTS OF THE UTERUS.*

By EUGENE BOISE, M. D., Grand Rapids, Michigan.

The importance of this subject has given rise to many papers and will be the excuse for many more. Some who have spent much time in studying this condition, think finally that they have discovered certain important points and facts which others do not know. Others who are forced to a more or less thorough knowledge of these displacements and their consequences by being so often called upon to treat those who are suffering therefrom, cannot avoid seeing that the majority of physicians do not appreciate the condition as to its causes, consequences and remedies, and largely for self-enlightenment study it and bring it before the professional public.

But the fact remains that ever since the first apprehension of the truth that

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displacements of the uterus were a source of constant suffering to the women so afflicted, attempts at relief have been made. Yet, even at the present day no method has been found that commands the approval of all gynecological surgeons. Pessaries of all kinds have been devised, and in many cases have afforded relief, but seldom do they promote cure. They have, instead, often been a source of trial and dissatisfaction to the physician as well as to the patient and therefore surgical aid has been invoked. But in order that this aid shall be properly directed, it is necessary to bear in mind the anatomical relations of the parts, and to consider the causation of the displacements. I shall not attempt, in this paper, to describe technically nor minutely the anatomical relations of the various organs and tissues, but only so much as may be necessary to enable me to present my own views clearly, not claiming to have discovered anything new, but hoping to emphasize facts already known.

The structure and size of the uterus are too well known to need mention. Its position behind the pubes and between the bladder and rectum all will remember. It may be said to be perpendicular in its axis to the plane of the superior strait of the pelvis, and held in this position by a combination of forces. On a knowledge of what these forces are, and how they act, hinges the secret of success in all efforts at restoration. Freely movable within physiological limits, that it may accommodate itself to the various movements and positions of the body, it is held in its position by various so-called ligaments, which are the actual supports of the uterus. Though with reference simply to their individual action, they may more properly be called "guy-ropes" to the uterus—their force as supporters being dependent greatly upon their co-ordinate action. The round ligaments, composed of fibrous and muscular tissue, arise from the sides of the body of the uterus, just below and a little in front of the Fallopian tubes, and passing laterally outward, beneath the peritoneum covering the anterior layer of the broad ligament, curve forward to the internal inguinal rings and passing through those into the inguinal canals, divide and subdivide into various smaller bundles of fibres, so that when they emerge from the external rings to be inserted into the tissue about the pubic spines and mons veneris, the fibres are so small as to be found only after lengthened search. These ligaments tend to prevent the backward displacement of the fundus of the uterus, but owing to their position in the broad ligament (curving forward gradually toward the internal ring) their action as a support would be mild if it were not supplemented by other forces. The composition of the round ligament being partly muscular and partly fibrous, allows a gradual elongation of the cord under the influence of any frequently recurring or constantly acting traction. The action of the round ligaments is supplemented very powerfully by that of the utero-sacral ligaments. By the combined action of these two ligaments the uterus is maintained in its position of physiological anteversion. These utero-sacral ligaments consist of two cord-like masses of fibro-muscular tissue which pass backward from the posterior aspect of the upper portion of the cervix on either side of the rectum, and are inserted into the second sacral vertebra. Their action, as may readily be seen, is to prevent the forward displacement of the cervix. Then there are the so-called utero-vesical ligaments, which are in reality little more than an aggregation of connective tissue fibres lying beneath two folds of peritoneum, which pass from the cervix of the uterus to the base of the

bladder. These three sets of ligaments constitute the actual supports of the uterus; their action is, however, supplemented by the indirect support of the tissues below the uterus.

One of our distinguished teachers has said that the perineum does not support the uterus, any more than the shoe supports the trouser's leg above it. This statement is, at least, misleading for while it is technically true that the perineum does not support the uterus, it is equally true that destruction of the perineum is almost invariably followed by descent of that organ. All things which tend to promote descent of the uterus in the axis of the pelvis are predisposing causes of backward displacements. And in this sense the perineum is an important indirect support to the uterus, though it may more correctly be called a support to the rectum, which, as you know, lies behind and parallel with the vagina, till it lowers one or two inches, when it becomes deflected backward and terminates at the anus. This curvature is more sharply marked in the anterior wall than in the posterior, so that the fæces, in their passage through the rectum, forcibly impinge against this so-called perineal body, and are by the action of the muscles, naturally expelled. But if the perineum be torn, through the point where these muscles join, the support to the rectum is gone, and gradually the anterior wall becomes prolapsed or sacculated, forming the condition known as rectocele, so that the rectum cannot, except with great difficulty, empty itself without artificial aid. More than this, the constant force acting behind the perineum, not meeting with any corresponding resistance in front, acts as a very potent factor in drawing the anterior rectal wall downward. This, through its intimate union with the posterior vaginal wall, draws this downward, and thus exerts a constant force on the posterior aspect of the cervix uteri, drawing that part downward and forward. This throws the uterus out of that normal balance by which it is so easily and perfectly held where nature placed it, and allows the forces acting from above—constipated bowels, tense abdominal walls, tight clothing, etc.—to be exerted more in a line with the axis of the uterus, quickly overcoming the resistance offered by the various uterine ligaments, and causing "falling of the womb."

I have not attempted to give a description of the anatomy of the perineum, nor to describe the action of the muscles composing it—more than to show in what manner it is an important factor in the support of the uterus. I have said that all things which tend to promote descent of the uterus in the axis of the pelvis, tend to promote backward displacements of that organ. I have shown in what manner rupture of the perineum does this. And it must be equally plain to you how constant pressure from above, even if the uterus still retains its condition of perpendicularity to the plane of the superior strait of the pelvis, will gradually and surely force it downward. This of necessity causes elongation of both the round and the utero-sacral ligaments. Then a sudden fall backward, or any force applied to the anterior surface of the fundus uteri, will easily result in retroversion. In retroflexion the utero-sacral ligaments have not been elongated in a ratio equal to the round ligaments, and therefore the cervix cannot be carried forward.

I have given this rapid resume of the relations of the uterus to the surrounding parts of its anatomical supports. And of the causes of the backward displacements, in order that we may more clearly discuss the means to be taken to

repair these displacements. I shall not discuss the use of pessaries, although many believe they are the only proper means of relieving the discomfort arising from displaced uteri. Without doubt, there are many cases where a well-fitting pessary, applied to a properly reduced uterus, will maintain it in its correct position as long as it can be borne, and will give great relief to the sufferer. But at best they are only palliative, and are in many cases annoying to the patient. Moreover, there is a large class of cases where they are not well borne, because, it may be, of displaced ovaries or an irritable condition of the appendages. Therefore, for the radical cure of these displacements and the permanent relief of the suffering, surgical aid must be invoked.

Many and varied have been the attempts to meet the indications. Some (notably Dr. Byford, of Chicago) have advocated drawing the cervix back to its original position by shortening the utero-sacral ligaments, thus throwing the fundus forward onto the bladder. This operation, when not supplemented by any other, does not seem to have met with general approval and I shall not describe the technique. Others have attempted the same thing by other means.

Shortening the round ligaments, as described by Dr. Alexander, met with great favor and was universally tried because it seemed more nearly to restore the parts to pre-existing conditions. It promised to hold the uterus in its normal position by restoring its main supports to their normal condition. The steps of the operation were, briefly, to cut down upon the external inguinal ring and there to search for the ligaments. Having found them, to draw them forward out of the inguinal canal as far as might be necessary, and to stitch the ligaments into the wound. This operation, although promising everything, rapidly fell into disfavor because of the difficulty experienced in finding the ligaments, and because of their being so small when found as to fail in being a sufficient support to the uterus.

Later, the operation of ventro-fixation was devised and advocated, and was adopted by many. This, as originally practiced, consisted in opening the abdominal cavity, bringing forward the displaced fundus, and stitching it to the abdominal walls. Some, with a curved needle, passed a catgut suture around either round ligament, just at the uterus, and deeply into the abdominal muscles, about one-half or three-fourths of an inch from the margins of the wound, and back into the cavity. These, when tied, brought the fundus of the uterus in close apposition to the lower angle of the abdominal incision. Scarifying the anterior surface of the uterus renders the union to the walls more certain and firm. Others have passed a suture through the tissues on either side of the wound and through the substance of the fundus uteri, which could be removed with the other sutures.

The only objections to these methods, that I have heard advanced, are that they necessitate opening the abdominal cavity, and that there is danger of a knuckle of intestine becoming imprisoned in the space anterior to the uterus. This latter objection is, I think, largely theoretical, as I have never seen a case reported. But that it necessitates opening the abdominal cavity is a valid objection, and should confine the operation to cases where laparotomy is necessitated for other diseased conditions. To meet this objection, Dr. Krug, of New York, has lately devised an operation which consists in cutting down to near the peritoneum and passing a large curved Hagadorn needle through the muscle,

fascia and peritoneum on one side to the face of the uterus, which is held in position by an assistant, scarifying the surface of the uterus with the cutting edge of the needle, and passing it through the fundus of the uterus, bringing it out through the tissues on the other side of the wound. This operation did not meet with general approval, because of the comparatively small danger from opening the abdominal cavity, was substituted a greater one of wounding an intestine.

Other operators, after making the abdominal section, bring the uterus forward and attempt to hold it in its normal position by taking up the slack in the round ligaments, folding them on themselves in front of the uterus and perhaps attaching them to that organ. This operation is not only unnecessary, but inexcusable in cases where the only abnormality to be overcome is the displacement. The same thing can be better accomplished by the modified Alexander's operation, described by Dr. Edebohls, of New York, and Dr. Newman, of Chicago, and which I am now using. This, in my opinion, is the proper operation for all cases of simple retroversion of the uterus, uncomplicated by dense adhesions or disease of the appendages.

I purposely say *dense* adhesions because many times adherent retroverted uteri can be replaced by what is known as Schultze's method. This is done by passing two fingers of one hand into the rectum, the thumb into the vagina against the anterior surface of the cervix, then with the fingers in the rectum gradually tear loose the adhesions, lifting the uterus up at the same time, meanwhile the fingers of the other hand work down behind the pubes to meet those in the rectum. By this means very firm adhesions can often be broken up. The patient must of course be anæsthetized at the time of the operation, and kept quiet several days afterward. I have practiced this form of reduction, with the assistance of Dr. Wanty, of this city, in a case which had resisted everything else, and on which I afterward performed a very successful Alexander's operation.

The technique of this operation, which I have now made in a number of cases with uniformly excellent results, is as advised by Dr. Edebohls, of New York. Prepare your patient beforehand with as much care as for a laparotomy, beginning these preparations at least twenty-four hours before the operation. A laxative to promote free and complete evacuation of the bowels; moderate and simple diet; a sitz-bath (antiseptic); antiseptic vaginal douches; scrubbing the skin in the neighborhood of the proposed incisions with hydro-naphthol soap followed by a solution of corrosive sublimate, one to one thousand; the mons veneris and neighboring integument carefully shaved, then covered with aseptic gauze bandages. All this the evening before the operation. At the time of the operation, after the patient is anæsthetized, the final preparation is made. The bandages are removed. The parts reshaved and washed with hydro-naphthol soap, followed by ether and finally the corrosive sublimate solution. Locate the spine of the pubes as your guide (if the subject is very fat, this can easily be done by passing your finger between the labia majora, up under the mons veneris), and cut directly down to it, in a direction parallel with Poupart's ligament, making your incision one or one and a half inches long. Carry your cut to the facia covering the canal, and you will lay bare the external ring. Thus far the operation does not differ from that originally described by Dr. Alexander. But instead of seeking for the fibres of the round ligament in the external opening, pass your grooved director under the fascia in the direction of the canal,

about one inch upward and outward and cut, laying open the entire length of the canal. Let your assistant hold away the outer edge of the fascia with a tenaculum, while you, with a blunt hook, seek for the ligament just after it emerges from the abdominal cavity and before it divides into smaller bundles of fibres. Dip deeply into the canal from the outer side and you can generally bring the cord up beneath the muscle, from which you can readily separate it. After you have become familiar with the appearance of the ligament, you can often, by holding the overlying muscle away, pick the ligament up from the bottom of the canal, just after it emerges from the cavity. I have seldom any difficulty in finding it at once, whereas in the operation as formerly made, the best operators would often spend an hour or two in the search and then find the cords so small as to be of little service. (I have succeeded in finding both cords and drawing them out to their full extent in seven minutes from the time I began my first incision). Having found the ligament, draw it forward through the internal ring, an assistant meanwhile holding the uterus forward in its proper position. Looking closely you will see that the peritoneal covering of the cord is drawn forward with it. This must be stripped back so that the ligament is free. The same procedure on the other side will enable you to hold the uterus in its proper position. Care must be exercised not to draw it more to one side than the other, nor too tightly forward. Cover one wound with gauze while working on the other. Pass a curved needle (preferably a Hagadorn) through the integument and fascia and ligament, then out through the fascia and integument on the other side of the wound, being careful to pass the needle in such a manner as to *separate* the fibres of the cord rather than *cut* them. Four or five such sutures on each side will hold the ligament firmly in the wound. The surplus of the drawn out cord may be cut away or folded in the wound. I prefer to cut it away. Irrigate your wounds and close them. Dress with iodoform powder, or a mixture of iodoform and boracic acid. Cover with sterilized gauze and cotton and a figure of eight bandage. Remove the sutures at the end of the sixth or seventh day. Keep the patient in bed three or four weeks and caution her to exercise great care as to her movements till after the expiration of eight or ten weeks.

This operation is all that is needed in the majority of cases, and will give good results, but when you are dealing with a large uterus, with relaxed vaginal walls, it will be wise to pass a catgut suture through the utero-sacral ligaments (in the manner described by Dr. Byford) drawing them up and shortening them. This will be the ideal operation for retroversion of the uterus, uncomplicated by adhesions or diseased appendages.

TRACHOMA.*

By R. W. GILLMAN, M. D., Detroit, Michigan.
ASSISTANT OPHTHALMOLOGIST TO SAINT MARY'S HOSPITAL, ETC.

Trachoma, or granular conjunctivitis, as it is usually called, is an extremely common affection. Perhaps there is no disease of the eye which has received more attention, or about which more has been written, than this. Trachoma

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

proper is eminently a chronic condition of the conjunctiva of the lids; rarely attacking, to any extent, the conjunctiva of the globe. I shall not, this evening, mention in detail the different forms it takes, for it would be tasking too much your patience and your time. I shall simply say the two chief varieties of the affection are the papillary and the lymphoid forms; and more often these are found mingled in the same eye.

Here let me state that, while at one time these different forms were supposed to represent two distinct maladies, Piringer and others, through some interesting experiments, have proved lymphoid and papillary trachoma to be one and the same disease. It is unquestionably contracted by infection from a trachomatous affected eye. The secretion contains, no doubt, a micrococcus, of the exact nature of which we are still in doubt; but Sattler, Leber, Koch and others, claim that the micrococcus resembles the gonococcus, though not identically the same.

A very common way of spreading the disease is through many people, one or more of whom are infected, using the same toilet articles—towels, basins, etc. We see examples of this in prisons, barracks, on shipboard, and under other similar conditions. For this reason you will understand why it is more often found amongst the poorer classes.

The Orient may be considered its home; and it is especially virulent in Egypt, Syria and Arabia. There the form most commonly seen is granular ophthalmia with profuse secretion, which easily spreads among the natives, owing to their careless habits in regard to cleanliness, and also their trusting themselves for treatment to Allah alone.

Napoleon I, in 1798, landed with some thirty thousand soldiers in Egypt, and very soon after, most of the men were attacked with granular ophthalmia. Their return to Europe was the cause of an epidemic of the disease; and from this fact writers of that period named it the *Egyptian eye disease*, by which name it is often known to this day. It created much havoc in the great armies of Europe which took part in the Napoleonic wars. The Prussian army in 1813 to 1817 lost twenty thousand soldiers from blindness caused by trachoma. Fortunately in this country we have suffered no epidemics of granular ophthalmia; the disease, as a rule, not assuming a violent catarrhal form.

Papillary trachoma is accompanied with no great hypertrophy; the lymphoid variety, on the other hand, presents a considerable thickening of the tissue; but more often the two states are found in the same eye.

The chief danger from trachoma is to the cornea, by the mechanical action of the parts, the granulations rubbing against and irritating it; and by cicatricial changes in the lid causing the eyelashes to turn in on the globe, producing ulcerations, vascular development, and opacities, which often lead on to complete loss of sight.

The treatment of trachoma may be classed under two heads—medicinal and surgical,—the cases which can be submitted to surgical treatment being in the minority. The surgeon's first duty is to make known to the patient the contagious character of the disease, insisting on the adoption of special precautions in the case of toilet articles, and guarding against the use by others of his basin, towels, etc.

The greatest difficulty in the treatment of trachoma is the length of time required to complete the cure, it often taking months to bring about the desired end. Of course, antiseptics and hygienic environment are a necessity. Where

there is diffuse, hard thickening, without much secretion, the application to the everted lids of a crystal of the sulphate of copper gives good results. Where inflammatory symptoms with secretion show themselves, solutions of nitrate of silver or acetate of lead, used directly upon the palpebral conjunctiva, seem to be indicated. In the soft lymphoid infiltration, I have seen cases progress with remarkable rapidity under the application of a saturated solution of the acetate of lead. But in using solutions of lead there must be no abrasions of the cornea, for fear of precipitations of lead making white opaque spots. When the granulations are isolated, they can be destroyed by the actual cautery, or by incision, and squeezing out the contents with forceps. Where we meet redundant gelatinous granulations, no treatment can equal the crushing and stripping out method, which consists of ejecting the lymphoid infiltration under pressure of the forceps. Knapp's instrument, which I show you, acts nicely in these cases; but I think more highly of the little beak-like forceps, as one can work with them in the canthi, and accomplish the same results without as much dragging on the tissues. Cases that indicate this form of treatment can with its adoption be cured in a few days, whereas under the old method they would require months of persistent watching and care.

I cannot close without testifying to the wonderfully happy results I have seen brought about by the use of the infusion of the jequirity bean, a Brazilian plant, in the treatment of advanced stages of trachoma. I know objections are raised to its employment on account of it sometimes producing a too violent reaction, ulcerations of the cornea, and loss of the eyes. I would not recommend its adoption except in far advanced cases, where the cornea is in a seriously vascular condition, and where sight is partially or wholly lost.

It only remains to add that jequirity is not a dangerous remedy, if its action is properly watched; and at any signs of ulceration its use can be suspended, and the eye treated with antiseptic lotions. Its employment in these extreme cases is certainly preferable to the use of blennorrhœal inoculation; as the action of jequirity can be easily controlled, and the resultant affection is non-contagious, neither of which can be affirmed of the purulent ophthalmia. There also must naturally be a distrust and prejudice on the part of the patient regarding his inoculation with so loathsome a disease; and its use, possibly partly for this reason, as well as the danger there is in employing it, is fast becoming obsolete, the treatment by jequirity well supplying its place.

PRACTICAL PATHOLOGY FOR BUSY PRACTITIONERS.

By HENEAGE GIBBES, M. D., C. M., L. R. C. P. (London), F. R. M. S.,
Ann Arbor, Michigan.
PROFESSOR OF PATHOLOGY IN THE UNIVERSITY OF MICHIGAN; CONSULTING PATHOLOGIST TO HARPER HOSPITAL DETROIT.

THIRD PAPER.

ON CUTTING SECTIONS OF RAPIDLY HARDENED TISSUE.

As was stated in the last paper the tissue removed during life and rapidly hardened, is necessarily of small size. To make a diagnosis of the case it is essential that this tissue should be cut into thin sections for microscopical examination. To do this it is necessary to imbed it in some substance that will hold it firmly while at the same time it can be cut as easily as the tissue itself.

The best material for this purpose is made by taking equal parts of white wax and olive oil and heating them until the wax is dissolved. This mixture rapidly solidifies and becomes quite firm, when it can then be readily cut with a razor. Having obtained the imbedding mass the next step is to make some arrangement by which the hardened tissue can be fixed in the solidified imbedding mass so that sections can be cut while the mass is held in the hand. To do this it is necessary to have a small brass or tin box, with a removable bottom. The most useful size is two inches long by three-fourths of an inch wide and three-fourths of an inch deep. These boxes can be procured from Eberbach & Son, Ann Arbor. A small porcelain or granite iron ladle is required to melt the wax mass in, which can be readily done over a spirit lamp.

It is important in many cases to know the relation of the small portion of hardened tissue to the part from which it was removed, so that a vertical section can be cut. A note should be made on the label of the bottle at the time of placing the tissue in the hardening fluid, in those cases where it would be difficult to make out the external surface from the naked eye appearance of the hardened tissue. The tissue is removed from the hardening fluid and a fine needle inserted in it, so that when it is held in the box containing the fluid wax mass by the needle in a perpendicular position that part which is to be cut into sections shall be nearest the end of the box, in order that the sections of it shall be vertical. The needle will, of course, be placed in the tissue as far as possible from the part that is to be cut.

To imbed the tissue: First place the removable bottom of the imbedding box on the table. On this lay a three inch circular filter paper, then lay the box on the filter paper and force it into the bottom. The filter paper will fill up the space between the bottom and sides of the box and prevent the fluid wax mass from running out. The paper is also useful when two portions of tissue of different kinds are imbedded in one box. They are placed at either end, and their names can be written on the filter paper which will adhere to the wax mass when it has become solid and is removed from the box. The box being now ready, remove the tissue from the spirit and insert the needle as already described, at the same time liquefy the wax mass, but be careful not to make it too hot. Let the tissue become surface dry by blowing on it or touching it on a bit of filter paper. As soon as all the glistening appearance has disappeared dip the tissue for a moment in the melted wax mass. This will give it a coating which will rapidly set. Then fill the box a little more than half full with the melted wax mass and hold the tissue on the needle in it until the wax mass sets, then by gently turning the needle round it can be disengaged from the tissue and removed. As soon as this is done fill up the box until it is quite full and leave it to cool. The tissue should be held so that a thin layer of wax mass will be between it and the end of the box, about one-eighth of an inch will be sufficient. The box should be allowed to cool slowly and this must not be hurried by putting it outside a window in cold weather or by holding it under a tap of cold water as the wax mass will crack and break up into several pieces. As soon as the mass has become thoroughly set throughout—the time this will take will vary with the surrounding temperature—push off the bottom of the box leaving the paper adhering to the wax mass, then gently push it out of the box and the result will be a square mass of solidified wax and oil having a portion of tissue imbed-

ded in one or both ends, in the center of the end and about one-eighth of an inch below the surface.

The next step is to cut this imbedded tissue into sections. To do this a double hollow ground razor is required—any good razor will do. Eberbach & Son have imported some of Heiffor's from Sheffield which are admirable for this work. The one thing needful is that the razor must be as sharp as possible and absolutely free from the smallest notches. A razor that may be keen enough to shave with will often not be nearly sharp enough to cut sections. Everyone should learn to sharpen their own razor—it is easily done and the only things required are a soft German hone and a smooth leather strap. These hones can be procured from the firm above mentioned and those should be selected having surfaces free from markings and soft enough to be easily scratched by the finger nail.

To sharpen a razor lay the hone on the table in front of you and put some water on it, *not oil;* with the back of the razor spread the water all over the hone; then draw the razor across the hone, edge first from right to left, beginning at the heel and working it diagonally; then repeat the process from left to right, always with the edge foremost, and always from heel to point. The only difficulty to be overcome in sharpening a razor is to get the motion from left to right equal to that from right to left, the tendency at first always being to put most weight on the right to left movement when they should be both equal. A little practice will overcome this difficulty. After passing the razor about a dozen times each way, take a small piece of cardboard and gently draw the edge of the razor over the edge of the card. The smallest notch will at once be felt. If there is a notch the process must be repeated until it is ground out, if not wipe all the water off the razor and use the leather, drawing the razor in the opposite way to that used on the hone. It will now be fit for use. This method of sharpening razors is worth learning by those who shave as they will be surprised at the difference when using a well sharpened razor.

To cut the sections: Procure a small glass capsule or dish and place some alcohol in it. Then carefully cut away the wax mass until the imbedded tissue comes into view. Then holding the razor with the handle extended and grasped by the whole hand, dip the point into the alcohol and let some run along the blade to wet it; at the same time wet the end of the wax mass containing the exposed tissue with alcohol. *The imbedded tissue and the blade of the razor must always be kept wet with alcohol.* Now draw the razor toward you along the top of the wax mass taking off a thin section; dip the blade in the alcohol and wash this off or push it off with the little finger of the left hand. The razor in cutting sections is drawn diagonally across the top of the wax mass from heel to point and both arms should be held free and not rested on the table. Sections cut in this manner are not as even as those cut with a microtome and it will take some little practice before the beginner is able to cut any that will be thin enough for microscopic examination. They will also be all more or less wedge-shaped, but even these will often show enough structure at their free edges to admit of a diagnosis being made in an ordinary case. As soon as all the tissue has been cut, the best of the sections must be picked out and placed in a watch glass of clean spirit in readiness for the next process, that of staining with some reagent which will differentiate the different elements of which the tissue is composed and allow any pathological change to be easily recognized.

CLINICS.

GYNECOLOGICAL CASES AT MERCY HOSPITAL.

SERVICE OF WILLIAM T. DODGE, M. D., BIG RAPIDS, MICHIGAN.
SURGEON TO THE HOSPITAL.

OVARITIS: REMOVAL OF OVARY.

MRS. F. Admitted September 29, 1891. She had suffered from gonorrhœa a year before and since that time had not been free from pain in the left iliac region extending down the limb. She was unable to work and had not been relieved by local treatment at the hands of several physicians. Physical examination discovered an oval swelling to the left of the uterus, freely movable but very sensitive. The gonorrhœal history gave rise to the suspicion that the swelling was a pus tube and its removal was recommended and agreed to by the patient.

I operated on October 1, assisted by Dr. Burkart. The tube was found to be normal but the left ovary was as large as a hen's egg and very vascular. It was removed. The right ovary being normal was not disturbed. The patient made a good recovery and left the hospital on the twenty-first day entirely well. She has since had no return of the pain.

DOUBLE PYOSALPINX: EXTENSIVE ADHESIONS.

MRS. L., aged twenty-six. I was called to see this patient October 20, 1891, in consultation, and found that she had been sick eight weeks. She had suffered from an attack of peritonitis six years before, she stated, and had not had good health since but had been able to do a great deal of work until about September 1, when she was taken with great pain similar to labor pains. The patient had never been pregnant and had menstruated regularly. She had had a recurrence of this severe paroxysmal pain every day during her sickness and continued to have it to the day of the operation. The pain would commence about the same hour every day and continue three or four hours, being in character exactly like the pains of the last stage of labor. Morphia in large doses was powerless to afford relief.

Physical examination disclosed the pelvic contents to be matted together and to be immovable, the whole giving the impression of a large solid tumor. Exploration of the uterus disclosed it to be of normal depth and the use of the curette revealed nothing abnormal on its lining membrane. The examination made no difference in her subsequent symptoms and an abdominal section was recommended but was not consented to by the patient until November 12, at which time she was much reduced from the long continued pain and was in a very poor condition indeed for operation. However, as it was the only procedure that gave the least hope of saving her life I consented to do it and had her moved to the hospital where the operation was done on November 12, with the assistance of Drs. Burkart, Bigelow, Griswold, Dockry and Romig, of this city. The peritoneum was found much thickened and changed in its physical appearance. The pelvic contents were found to be matted together by very firm adhesions. The left tube was three inches by two inches in size, full of pus and firmly

adherent to the fundus of the uterus—being so intimately adherent in fact that before the abdomen was opened it felt as if it were a part of that organ. It was separated and removed without rupture, but the experience with the right tube was not so fortunate. It was very firmly adherent low down in the pelvis and to intestines and was ruptured in an attempt to separate the adhesions. It was finally gotten out in pieces, the abdomen was freely irrigated with hot water, whiskey was injected hypodermically in large quantities, and every effort made to establish reaction but without success. The patient lived twenty-six hours but her pulse never became perceptible at the wrist. The result may fairly be attributed to the delay and the consequent low condition of her system at the time of the operation.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, FEBRUARY 15, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS.

DR. H. W. LONGYEAR exhibited a tumor which he had removed from a patient presenting the following history: Two and one-half years ago when lifting a patient she had a feeling of something giving way in the abdominal cavity with a great deal of pain. This was followed by a pelvic inflammation which yielded partially to hot applications and injections. She finally recovered enough to resume her duties—that of a nurse—but for the last two or three months has been again confined to her bed most of the time. A thorough examination under an anæsthetic revealed a tumor situated behind and to the right side of the uterus, connected with the right broad ligament. When the tumor was brought out through the abdominal incision it suddenly slipped away and we had great difficulty in finding it. Finally it was found near the right kidney and removed. Very little hæmorrhage followed and the patient is making a good recovery. This patient exhibited a peculiar idiosyncrasy to the action of morphine—one-eighth grain hypodermically producing great depression and a pulse of 130.

DISCUSSION OF PAPERS.

DR. T. A. MCGRAW read a paper entitled "On the Causation and Pathology of Idiopathic Varicocele." (See future issue of The Physician and Surgeon).

DR. DONALD MACLEAN: Varicocele is a very common and annoying affection giving great mental anxiety to the patient and annoyance to the surgeon; it is therefore a very important and interesting subject. DR. MCGRAW'S explanation of the pathology of the disease is good and I agree in the main with what he has said. I have always thought, taught, and believed that the pathology of this disease is one of those conditions in which the natural balance in the tissue is lost. We know that a very slight loss of balance will be followed by dire results. An injury to the tendo achillis will produce change in the rotation of the whole

leg, and a disease or injury involving the sterno-cleido-mastoid muscle will mutilate the whole upper part of the body. I have therefore always believed that in these cases of varicocele there has been some change in the balance of the blood-vessels, nerves and muscles in this region. Just exactly what this change is or what is at the bottom of it I am unable to say, and while I agree in the main with what DR. MCGRAW has said I am not sure but his theory may not be open to some doubt. That these local changes produce profound constitutional effects admits of no doubt. Ligature of the veins is of but little value but the removal of a part of the scrotum, especially if there be a redundancy, goes a great deal further to restore the natural but lost balance in the tissues. The operation was originated by SIR ASTLEY COOPER but I did the operation about twenty years ago, not knowing at that time that it was not original with myself. It is a safe operation and is usually followed by brilliant results. This is a deep-seated disease attended by nervous and general symptoms. I agree with DR. MCGRAW in his statement that the causes usually given for this disease are in the main absurd, and I also compliment him on his thorough and scientific paper.

DR. G. W. STONER: I have never removed any of the scrotal tissue for this disease, not being able to convince myself that it was a scientific procedure. Nevertheless I am glad to hear of DR. MACLEAN'S brilliant results. I have used the subcutaneous ligature, either silk or catgut, allowing it to drop back into the tissues. Usually good results follow this procedure.

DR. DONALD MACLEAN: I sometimes combine ligature and removal of part of the scrotal tissues with good effect. Of the many cases I have operated upon by removal of part of the scrotum I can now call to mind only two cases which were not successes, and in these two cases there were other causes which operated to produce the poor results.

DR. A. W. IMRIE: Does varicocele produce atrophy of the testicles?

DR. T. A. MCGRAW: Varicocele and atrophied testicles are sometimes associated, and the former is sometimes the cause of impotence in the male. The combination of the two operations spoken of by DR. MACLEAN is certainly the most radical procedure, but many cases do not present a lengthening of the scrotum.

DR. DONALD MACLEAN: A recent case of varicocele in a letter-carrier, whose wife had borne no children, was followed by greatly increased sexual capacity on the part of the husband, but to date the wife has not become pregnant.

REPORTS OF CASES.

DR. DONALD MACLEAN reported an amputation at the shoulder-joint in a man who had suffered a severe railway accident. The recovery is perfect, but he is delirious for some time every day, though at other times perfectly sound and well. One other case I call to mind of this nature recovered.

DR. T. A. MCGRAW: I recollect one case of that nature occurring in a man wounded during the war.

DR. H. O. WALKER: (1) Radical cure of hydrocele by a new method. In children suffering from hydrocele a simple puncture will sometime suffice. Following are some of the methods used in the treatment of this disease: (a) Stitching the secreting membrane to the skin; (b) Iodine injections; (c)

Carbolic acid injections. In my case I laid the scrotum open by a free incision. The secreting surfaces were then freely and thoroughly scraped with VOLKMAN'S spoon. The surfaces were then brought together by deep buried sutures from the bottom of the incision to the skin. The skin was then approximated by silk sutures. (2) Extrophy of the bladder. The interior wall of the bladder was absent and its place was supplied by a plastic operation, a large apron-like flap forming the interior bladder wall.

DR. E. T. TAPPEY: A woman who had been passing small renal calculi per *vias naturales* brought these little pebbles to me saying that they had been found in her fæces, but you will see that they were not manufactured in the human body. They are ordinary gravel pebbles.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, FEBRUARY 22, 1892.

THE PRESIDENT (*pro tempore*), JOHN FLINTERMANN, M. D., IN THE CHAIR.

REPORTS OF CASES.

DR. JOHN FLINTERMANN reported a case of malignant scarlet fever and made remarks tending to impress the fact that scarlet fever is often a very grave malady.

DR. A. W. IMRIE: Did the rash show itself either before or after death? I have seen cases which have died within twenty-four hours in which the rash made its first appearance after death.

DR. JOHN FLINTERMANN: The rash in this case did not show itself at all.

DR. G. W. STONER reported a death from extravasation of urine, gangrene, etc., complicating stricture of the urethra, and exhibited pathological specimen showing ulceration of the urethra. He also presented an appendix vermiformis measuring eight and one-fourth inches in length.

DR. W. P. MANTON: I operated recently upon a woman whose vermiform appendix was so long as to be at first mistaken for a Fallopian tube.

DR. A. W. IMRIE: In the case of death from extravasation of urine which DR. STONER presented to the society to-night it would seem that the man, even at the time of his death, was well nourished and strong. Some internal organ may have been at fault, or perhaps the free exhibition of digitalis may have had something to do in hastening the fatal result.

DR. G. W. STONER: The man had had no digitalis for some considerable time before his death and I do not think it could have played any role in the fatal outcome.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, FEBRUARY 29, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. H. W. LONGYEAR exhibited a patient who had an enormously enlarged spleen. Upon microscopic examination the blood was found to be leucocythæmic, the white blood corpuscles being relatively much too many. In conse-

quence of this condition of the blood an operation will not be attempted as statistics show a great mortality following operations of any sort in patients with this kind of blood. The patient has had some malaria but it was not very severe or prolonged and for a number of years he has been free from this trouble entirely..

DR. JOHN FLINTERMANN: Is this leucocythæmia? or have we merely an amyloid or lardaceous degeneration of the spleen? None of the other glands of the body are enlarged. It is a rare and interesting case and should be thoroughly discussed. The urine is of a high specific gravity being loaded with urates and uric acid. A case similar to this which came under my observation years ago was found post-mortem to be a case of amyloid degeneration of the spleen. The prognosis is always grave and many remedies have been tried with very indifferent success and even extirpation has been recommended. All operations, whether directed to the spleen or to other organs, must be avoided as great hæmorrhage sometimes follows very slight lesions. Pleuritic effusions sometimes occur but they should not be interfered with in patients having this peculiar condition of system.

DR. E. W. JENKS: Enlarged spleen or ague cake occurred very frequently in the earlier years of my practice. This form of enlarged spleen yields very readily to antimalarial treatment. Enlarged spleens have been mistaken for extra-uterine pregnancies and ovarian tumors. I remember an instance of this kind where an enlarged spleen was mistaken for an ovarian tumor in a young girl. She was placed under an anæsthetic and her hymen ruptured to facilitate examination. She very nearly bled to death from hæmorrhage from the ruptured hymen.

DR. T. A. MCGRAW: These cases of ague cake could hardly be considered as parallel cases with this one of enlarged spleen with its peculiar blood condition. There are great differences in the two. I went once into the country for the purpose of operating upon a supposed ovarian cyst, but upon thorough examination an enlarged spleen was diagnosed and the operation was not undertaken, the patient died after some months and the diagnosis was confirmed post-mortem. This patient's younger sister also had an enlarged spleen.

DR. E. W. JENKS: I have never considered these two conditions identical pathologically.

DR. H. W. LONGYEAR: This patient has had no malaria for years and then but slightly. I have seen an instance of obstinate and persistent hæmorrhage brought on by an attempted abortion in a woman with an enormously enlarged spleen.

DISCUSSION OF PAPERS.

DR. D. S. CAMPBELL read a paper entitled "Is the Cure of Disease by Electrolytic Action Well Founded or Not?" (See May issue of The Physician and Surgeon).

DR. JOHN FLINTERMANN: My experience with electricity has been more particularly in its application to nervous diseases. I would judge that in most of these cases DR. CAMPBELL got a galvano-cautery effect especially when a very high number of milliamperes were used. I have seen tumors on the arms and enlarged indolent inguinal glands greatly benefited by electricity.

DR. H. W. LONGYEAR: I have used the galvanic current principally in gyne-

cological practice. It is especially beneficial in inflammatory exudates after all signs of active inflammation has subsided. Also in cervical endometritis. In the latter I begin with a small electrode and use it larger and larger until the canal is thoroughly dilated and the discharge greatly diminished. Ten or fifteen milliamperes for seances of ten minutes is what is required.

DR. E. W. JENKS: I agree with DR. LONGYEAR in his remarks. I was a pioneer in this region in the use of electricity and at first was not so thoroughly conversant with its effects as now. One must know thoroughly how, when, and where, to use this remedy to get its best effects. In ovarian diseases it is of no use whatever. It is of but limited use in fibroid tumors of the uterus. In some forms of fibroid it is of no use at all but in others in which an electrode can be introduced into the uterine cavity it is of great value. The lower currents, beginning with three milliamperes are the best. In pelvic inflammatory exudates it often acts well also in neurasthenia. In hæmosalpinx and hydrosalpinx it is of no value. In giving local treatment with electricity the patients feel the good effect of the general application of the remedy.

DR. W. R. CHITTICK read a paper entitled "Some of the Psychical Phases of Hypnotism."

Before reading his paper DR. CHITTICK successfully hypnotised a young girl and while she was under the hypnotic influence he applied the Paquelin cautery several times to her back.

DR. J. E. EMERSON: The real essence of hypnotism is little understood. Somnambulistic sleep, dreaming, and the hypnotic state are perhaps associated. Very little is known of the mechanism of any of them. Most of us spend a great deal of our sleeping moments dreaming and our minds are always active but it is only occasionally that we can, after waking, recall of mental actions during sleep. In hypnotism there is an inhibition of the higher or conceptive centres while the lower are still active. Those who have an unstable nervous system are the most liable to the hypnotic influence. Although they may be intelligent their nervous systems are not of the very highest order. Only the one who has induced the hypnotic state in a given patient is able to influence that patient in the state, although a very powerful influence emanating from another source may break through the hypnotic influence. Cataleptic, lethargic and somnambulistic conditions are varieties of the same state. There is no transfer of power from one person to another, but the condition is brought about by an impression made on the sensorium through some one of the nerves of sense, and if we shut out all the sense channels no man can influence a subject excepting by previous suggestion. The subject whom we have just seen hypnotized and apparently brought back from that state is still somewhat under the influence and will be for six hours. Experimenters have found that there are several states that a hypnotic subject may be placed in and that circumstances which transpire while the subject is in one state is not remembered when he or she is put into any of the other states.

DR. HELEN F. WARNER: Do you think anybody can hypnotize? Have you tried it in hysteria?

DR. W. R. CHITTICK: I think any individual who has confidence enough in his own capabilities can hypnotize. I have never tried it in hysterical subjects.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

SOME LIMITATIONS OF MEDICAL KNOWLEDGE.

THE custom of bestowing counsel and benediction upon the medical graduate, at the close of his student career, furnishes the medical orator an apt opportunity for descanting upon certain phases of medical problems for which no time is allotted in the ordinary curriculum. The admirable address delivered by Dr. C. G. Jennings to the graduates of the Detroit college of medicine, which is published elsewhere, contains some felicitous thoughts upon the limitations with which the practice of medicine is circumscribed, intended, no doubt, to temper the ardor of the student imbued with the fatuous belief of "knowing it all" by a mild repudiation of the spirit of absolutism in medicine.

The limitations of medical knowledge, it is pointed out, are those imposed by the relativity of all knowledge. "All positive knowledge is limited by human experience," it is said. Were this statement critically dissected it might perhaps mean more than was intended. The words of a wise man often have a meaning greater than the thought which gave them utterance. To say that positive knowledge is limited *by* human experience is obviously not the same thing as to say that experience is the only source of knowledge, for the former statement might imply the existence of an *a priori* metaphysical substrate to knowledge. In fact the apothegm of Dr. Jennings is to be regarded as an epistemological straddle, over which Immanuel Kant could be imagined to chuckle in his sepulcher.

The limitations of medical knowledge are those arising from the inconstant factors of the problem. "Medicine is not, or never can be, an exact science;" "uncertainty of diagnosis can never be eliminated." Individual idiosyncracy annuls the patient's plea to be made the subject of an absolute therapeutic. Specific medication, the fundamental fallacy of homœopathy, is self-condemned by its conception of disease as a distinct entity, and the personal equation as a constant quantity.

No less timely and admirable were the remarks, in the address alluded to, upon secret remedies and the right to keep them so. The temptation of the impecunious graduate to pose as the possessor of some therapeutical specialty, is great in proportion to the credulity of his patients, and this "credulity expands as the necessity for it grows." The attitude adopted by the profession in regard to proprietary rights is perhaps not to be attributed to the innate benevolence of the profession alone, but to a wise apprehension of that which is necessary to conserve its own interests in accordance with its beneficient purposes.

The new graduates were admonished to have a single eye to the welfare of their patients; "have no ambition beyond your profession." "The great practitioners are those who concentrate their powers upon their business." Dabbling in experimental therapeutics is to be deprecated; leave that to those whose calling is in that direction. Fidelity to the physician's true mission is the key-note of success. Nothing could be more admirable than advice of this kind, though something might of course be said for the "dabbler." It would not be difficult to mention numerous examples of notable physicians who dabble in matters outside their profession and who gain thereby mental diversion which

is in the nature of mental stimulus. All recreation should be re-creative, and so long as the outside occupation does not conflict with the physician's true mission, so long as it remains "dabbling" and nothing more, it is usually innocuous. Dr. Weir Mitchell who, though not exactly a general practitioner and not subject to all the exacting demands made upon the general practitioner is certainly a successful physician, has dabbled considerably in experimental matters, besides being a successful dramatist and a reasonably successful novelist. Many successful general practitioners could be mentioned who have some "hobby" to which they devote some portion of their idle moments. The general practitioner should not be a mere therapeutical drudge, something which, by the way, the unsuccessful practitioner usually is, but a man of wide information, generous culture and scholarly attainment for, as Dr. Jennings says, "the practice of the art at least demands an insight into all branches of wisdom;" so that he who by persistent effort may have mastered King Wan's explanation of the Chinese hexagrams need not thereby be unfitted to be a successful practitioner of medicine any more than is Mr. Gladstone unfitted for the work of a statesman because he may chose to spend his "dabbling" moments in the compilation of Homeric dictionaries.

In concluding his excellent address Dr. Jennings eloquently re-echoed the wish of Socrates "that wisdom could be infused by touch of the fuller man into the emptier man." After all is not this one of the ways wisdom is infused? Is there a better way of gaining wisdom than to mingle with the wise and suffer the pangs of inferiority such company always inflicts. True culture diffuses itself by sympathy, and not the least of the benefits the medical student derives from his curriculum is the lasting influence of living contact with those whose ripened experience invests them with the sapience of seers.

EDITORIAL BREVITIES.

THE PAN-AMERICAN MEDICAL CONGRESS.

REGULATIONS for the permanent organization of the Pan-American medical congress have been adopted. The congress at the instance of Senator Sherman has been incorporated and a bill will be introduced to provide an appropriation. The complete organization of the congress will be perfected by July of this year. The first meeting of the congress will be held in Washington, September 5, and following days, 1893. Everything augurs a successful event.

SURGERY OF THE BASAL GANGLIA.

IN the *International Medical Magazine* Dr. Ernest Laplace, of Philadelphia, records an intensely interesting case illustrative of modern heroic surgery. A child fell on a fencing-foil which inflicted a penetrating wound of the left orbit between the inferior orbital ridge and the eyeball. The child was found in an unconscious state. Ophthalmic examination revealed no injury to the eyeball. There was complete anæsthesia of the eye, right hemiplegia and left facial paralysis. The patient was etherized and a Graefe cataract-knife inserted into the wound; this sank by its own weight a distance of three and one-quarter inches in a superior and internal direction. Ten days afterwards there being

collapse an operation was undertaken. An incision was made in the temporal region at the left of the zygomatic arch. To reach the centre of the brain and remove the suspected clots a miniature egg-beater had been made of platinum wire. The clots were readily caught in the meshes of the egg-beater, a teaspoonful of old clotted blood being removed piecemeal. The trephined opening was plugged with iodoform-gauze and the case proceeded to complete recovery. This case is unique in the history of brain surgery and merits contemplation by all interested in this important branch of surgery.

THE CHICAGO WATER SUPPLY AND THE WORLD'S FAIR.

THE foreign press appears agitated over the Chicago water-supply and the dangers of typhoid poisoning during the world's fair. In January last Professor Sedgwick, of the Massachusetts institute of technology, read a paper before the American statistical association claiming that a great increase had of recent years occurred in the death-rate from typhoid fever. It was further claimed that this high mortality was due to sewage contamination of the water supply. Typhoid fever has been epidemic for two years in Chicago, and as the drinking water is taken from points in unsafe proximity to the sewage outlets the evidence for water infection is convincing. The enlightened and enterprising city of Chicago should not allow this imputation of unsanitary water supply to hang over its head, for the success of the world's fair in no small degree depends upon its activity in remediating these conditions.

THE NEW MILITARY WEAPONS.

THE German and English authorities have been giving a good deal of attention to the surgical effects likely to follow from the use of improved instruments of warfare. Both authorities agreed that the hospital preparations for the next war will have to be on a far larger scale than in any preceding war. The recently-introduced small-calibre rifles and their compound projectiles, together with the new explosives applied to them, will exert a serious influence on the casualties of future wars. The narrow bullets will be capable of penetrating several bodies at a time at great distances. A short time ago a laborer near Aldershot, was struck at a distance of two thousand five hundred and sixty yards by one of the new bullets. The bullet made an oblique passage through the thigh and buried itself in the ground. Smokeless powder will also render the facility of taking aim much greater. With these deadly agents of destruction in vogue, with air-ships dropping dynamite bombs into the midst of cities and camps, the next war promises to be a lively one for the surgeon.

MEDICAL NEWS.

THE Arkansas state medical society will meet June 2.

DR. W. B. SPRAGUE, of Detroit, has returned from Europe.

PARIS has a society for the promotion of maternal lactation.

DR. KITASATO, of Berlin, will open a bacteriological institute in Tokio.

A COLORADO physician in a recent medical discussion said he "had had the good fortune to make post-mortem examinations on several persons now living."

THE university of Minnesota will open a department of pharmacy this fall.

KEELEY is said to have sold his English rights in his "cure" for five million dollars.

ETHER-DRINKING is very fashionable in Paris just now. It is taken with brandy.

SPOKANE, Washington, has fifteen persons illegally engaged in the practice of medicine.

THE governor of Illinois has appointed I. N. Coffee a member of the board of pharmacy.

MUSCULAR contractions have been produced by stimulation with interrupted rays of light.

THE new United States pharmacopœia will have all formulæ expressed in metric terms.

IN 1826 quinine was sold to a wholesale house in Berlin for four dollars and fifty cents per ounce.

ONE millimetre is said to be the correct length for the surgeon's nails in these days of aseptic surgery.

THE *Corpuscle* is a new medical magazine edited by the students of Rush medical college, Chicago.

IN Australia the green boughs of the eucalyptus globulus are used as disinfectants in the sick room.

MR. BERKELEY HILL, the prominent English syphilographer, recently died in London, aged fifty-eight years.

SALIPYRIN, a chemical compound of antipyrin and salicylic acid, is a drug which will have the uses of novelty.

RUSH medical college, Chicago, is to have a biological and pathological laboratory at a cost of fifty thousand dollars.

THE hypodermic injection of perfume is said to be in vogue among ladies with a view to producing perfumed perspiration.

NEW sanitary measures in England have caused diminuation of the death-rate from consumption of thirty per cent. since 1861.

DR. J. A. OUCHTERLONY, of Louisville, Kentucky, has been decorated by the king of Sweden with the "order of the polar star."

HEINRICH ROSENTHAL, M. D., editor of the *Allgemeine Medicinische Central Zeitung*, died February 7, in Berlin, aged fifty-eight.

THE Missouri state medical association will hold its thirty-fifth annual session at Pertle Springs, Missouri, beginning May 17.

DR. JAMES ROSS, of England, the author of the well-known hand-book of nervous diseases, died recently of cancer of the stomach.

THE medical and chirurgical faculty of Maryland will meet in Baltimore, April 26. Joseph T. Smith, M. D., corresponding secretary, 1010 Madison avenue.

IT is proposed to enact a law in the Argentine republic requiring those who intend to practice medicine in that country to graduate there.

DR. PRESTON M. HICKEY has been appointed house physician at Harper hospital and a member of the medical staff of that institution.

CREMATION.—A bill has been introduced into the New York legislature prohibiting any disposition of the human body except by burial.

THE great prevalence of suicides from morphine has prompted a medical society in Colorado to draft a law restricting the sale of this drug.

IT has been discovered by a Polish chemist that oxygen is not colorless. In a layer thirty millimeters thick it is said to have a sky-blue color.

THE New York Pasteur institute will be closed because of non-support. Dr. Paul Gibier says that instead of being encouraged he has been cheated.

DR. A. L. GIHON, of the United States navy, is likely to become chief of the bureau of medicine and surgery of the navy department, Washington.

DAMAGES FOR MENTAL ANGUISH.—A decision of a Texas court allows a wife damages for the negligent delay of a railroad in forwarding her husband's corpse.

WE regret to learn that Dr. F. L. Sim, editor of the *Memphis Medical Monthly*, who has suffered many months from eye troubles, has had to have one eye enucleated.

THE university of Pennsylvania has received a munificent endowment of about a million dollars for a biological and anatomical museum from General Isaac J. Wistar.

THE medical society of the state of California will hold its annual meeting in Unión hall, San Francisco, April 19 to 23. The secretary is Wm. Watt Kerr, 600 Sutter street.

DR. WILLIAM H. BUNCE, one of the leading surgeons of Northern Ohio, recently died at his home in Oberlin, Ohio. During the war he was full surgeon with rank of major.

THE South Carolina medical association will convene in Georgetown, April 26. The corresponding secretary is Mozyck Rauluel, M. D., 103 Wood street, Charleston, South Carolina.

THE Canadian parliament is asked to establish and maintain a lazaretto in the province of British Columbia for the care of Chinese lepers who are quite numerous on the Pacific coast.

SAINT BARNABAS HOSPITAL, MILWAUKEE.—This hospital, by a decision of the supreme court of Minnesota, obtains four hundred thousand dollars in property to which it had been made legatee.

CANADA has four thousand one hundred and eighty medical practitioners apportioned by provinces as follows: Ontario, two thousand three hundred; Quebec, one thousand one hundred and ten; New Brunswick, one hundred and seventy; Nova Scotia, three hundred; Prince Edward Island, sixty; Manitoba, one hundred and forty; Northwest Territories, fifty; British Columbia, sixty.

AN international congress to consider questions relating to prostitution and syphilis will be held in Paris in 1893. It will be participated in by physicians, jurists, hygienists, economists, and sociologists.

WORDS, NOT DEEDS.—The English hangman who has judicially killed about two hundred criminals is about to resign his office and become a lecturer, advocating the abolition of capital punishment.

HOIST WITH OWN PETARD.—A Nebraska City quack advertised in the papers he had cured twenty-six cases of diphtheria. He was arrested at the instance of the board of health for failing to report them.

FRANCE is considering the enactment of a new law to regulate the practice of medicine. Its passage will render ineligible to graduation as physician, midwife, or dentist, any person ever convicted of crime.

ASSOCIATION OF AMERICAN PHYSICIANS.—The annual meeting of the association of American physicians will be held May 24, 25, and 26, 1892, in the medical museum and library, Washington, District of Columbia.

THE Michigan state medical society will hold its next meeting at Flint, May 5 and 6. It is hoped that the profession will make an effort to be present in large numbers. Flint is easily accessible from all points of the state.

MAX S. GUGGENHEIM, of New York city, has been sentenced to two hundred days imprisonment and required to pay a fine of one hundred and fifty dollars for engaging in the practice of medicine without a diploma or license.

THE national conference of charities and corrections will hold its nineteenth session in Denver, June 23 to 30. The secretary is Alexander Johnson, of Indianapolis, who will furnish all desired information concerning the meeting.

GREAT BRITAIN obtains a revenue of ninety-eight million five hundred thousand dollars annually from its stamp-duty on patent medicines. Thirty years ago the income from this source was two hundred and ten thousand dollars.

WARRENSBURG, New York, has a remarkable family. The census enumerator found a child three months old, the mother one month under fifteen years, the grandmother thirty-three years, and the great-grandmother fifty-four years.

A HEALTH TREATY between the United States and Mexico is one of the possibilities. It is proposed by the board of health of the city of Mexico "for the reciprocal protection of both countries against infectious diseases of men and animals."

PENSIONS are awarded to five thousand three hundred and eighty-nine deaf veterans. Total deafness afflicts one thousand two hundred and sixty of this number. The former class receive twenty-seven dollars per month, the latter thirty dollars.

THE army appropriation bill recently reported to congress by the military committee recommends a reduction of the annual allowance for the library of the surgeon-general's office of the United States army from ten thousand dollars to five thousand dollars. If this bill should pass it would jeopardize the formation of a complete medical library in Washington, and consequently it behooves every physician to exert his influence in opposition to the recommendation.

PROFESSOR EDWARD A. FREEMAN, the celebrated historian, recently died of small-pox. No life could have been less spared, and the community in which he lived will feel guilty should his death be proved to have been due to preventable causes.

THE ophthalmological section of the American medical association will dine together at the Cadillac hotel during the next meeting of the association in Detroit. The dinner will be held on Wednesday, June 8, at 6 P. M. The price of the ticket is two dollars.

THE death is recorded of Dr. Friedrich Immisch, of Heidelberg, who had achieved great fame as a specialist in the surgery of the duello. He had officiated at more than thirty thousand "affairs of honor" among the combative youth of the university.

M. CONSTANTIN PAUL, a prominent writer and teacher of Paris, has reported to the Paris academy of medicine a new treatment for neurasthenia. It is a one-tenth per cent. glycero-aqueous solution of the gray matter of the cerebrum of the sheep, administered by injection.

PREMATURE BURIAL.—The Paris *Temps* publishes a case of premature burial prevented by the daughter of the supposed dead man who, kissing her father, perceived the body was not cold. The funeral cortege was on the point of starting. The pseudo-corpse was restored to consciousness.

COUNTER-PRESCRIBING.—An unfortunate case has lately occurred in Detroit, where a druggist prescribed in a case of diphtheria. The case was never diagnosticated as such and the patient died. The coroner's jury has very properly directed the attention of the prosecuting attorney to the case.

FUNCTIONS OF THE SPLEEN.—"Can you tell me the functions of the spleen?" asked Professor Bruecke, of Vienna, of a student. The young man reflected a moment and replied, "I have forgotten them." "It is unfortunate you should have forgotten them," said the professor, "since you alone knew them."

WARREN insane asylum, in Pennsylvania, is said to be conducted in an improper manner. Complaints now in the hands of Governor Pattison and the state board of lunacy cite "the most brutal outrages on the part of those in charge of the insane patients." The charges are sworn to by sufferers and spectators.

THE establishment of a society for the help of discharged lunatics is proposed in France. The minister of the interior has issued a circular to the prefects of the departments relative to this benevolent project. The efforts of the organization would be directed to caring for those insane persons now confined in the asylums who are perfectly harmless but who have no means of support outside these institutions.

A BROOKLYN druggist who substituted corrosive sublimate for chloral hydrate in a prescription was sued for ten thousand dollars damages. Four drachms of the bichloride were put in the prescription, making each dose of the medicine contain twenty grains. The patient escaped death by vomiting nearly all the dose, but suffered intensely from the effects of the poison. The jury rendered a verdict of four thousand dollars for the plaintiff.

THE *National Medical Review* is a new medical journal published at Washington, District of Columbia, and edited by Dr. Charles H. Stowell, once of Michigan. The journal is very readable and is edited with a display of industry and ability which Dr. Stowell's friends always expect of him. We wish the new enterprise every success.

A BILL to regulate the practice of medicine in Ohio was defeated in the legislature of that state last month. The passage of the bill was recommended by the three leading schools of medicine, and opposed by the physio-medical school, country newspapers, and charlatans. A second bill has been introduced, however, which promises to meet with better success.

A LAW has recently passed the senate creating new titles for army medical officers. Officers of the medical corps holding the rank of colonel will hereafter be designated as assistant surgeon-generals, and those holding the rank of lieutenant-colonel will hereafter be known as deputy surgeon-generals. Titles similar to these exist in the British army medical corps.

AT the beginning of the present year the New York city insane asylums contained five thousand four hundred and eighty-five inmates at an annual expense of seven hundred thousand dollars; the New York state insane asylums contained five thousand eight hundred and seventy inmates, and it cost one million one hundred thousand dollars annually to maintain them.

THE WORD "REGULAR."—The surgeon-general has been asked to define the word "regular" in a paragraph of the army regulations as it occurs in the phrase "a graduate of a regular medical college." He has replied that the term "regular" is used in its most comprehensive sense indicating that the college is well-equipped and requires not less than three years of study to secure its diploma.

THE Oregon state board of health recently refused a certificate entitling a physician to practice in that state because the applicant did not graduate from a "medical institution in good standing,"—an institution requiring three regular courses of six months each extending over three years' time. The circuit court rendered a decision adverse to the power of the board, but on appeal to the supreme court the authority of the board was sustained.

DR. JOSEPH PRICE, of Philadelphia, one of America's most distinguished ovariotomists visited Detroit last month, being a guest of Dr. H. W. Longyear. Dr. Price gave an intensely interesting discourse before the Detroit medical and library association describing his views of pelvic pathology with all the vividness of the actual clinician. Dr. Price will again visit Detroit in June when he will read a paper before the American medical association on intestinal lesions in pelvic and abdominal surgery.

A CASE of alleged malpractice has recently been on trial in a Poughkeepsie court which terminated in a verdict of two thousand five hundred dollars against the physician. The suit was brought by a man who sustained a compound, comminuted fracture of the arm by falling upon a sidewalk of dirt and ashes, and was based on the ground that the physician failed to properly cleanse the wound. Septic infection resulted requiring incision of the arm to facilitate escape of pus. The arm has been useless since recovery.

RUSH medical college has a professor who tells his students that "learning is the establishment of cerebral automatisms. A given process of the mind must be repeated over and over again before it comes to be done automatically. He who has the largest number of automatic, or nearly automatic, cerebral movements and conditions that are correct, has the largest education. The life of the student is devoted to establishing this condition."

THE section in public health and legal medicine of the New York academy of medicine have issued a protest against the "baby students' relief bill," a proposed amendment to the present law requiring physicians who wish to practice in that state to pass an examination before the board. The students attending the medical schools of New York desire to be admitted to practice in that state on presentation of a diploma from a New York school. To this the profession object in a protest to the legislators.

SAINT MARY'S HOSPITAL, DETROIT.—The new addition to this hospital was opened March 15. The appointments are excellent being thoroughly modern. A fine new amphitheatre will greatly add to the clinical facilities of the Detroit college of medicine. Among the gifts to the hospital were noticed a complete outfit of modern surgical instruments presented by Dr. T. A. McGraw, the chief of the medical staff. Bishop Foley presided over the opening ceremonies. A collation was provided by the sisters, which was enjoyed by numerous members of the medical profession of the city.

DETROIT COLLEGE OF MEDICINE ALUMNI.—The annual meeting of the alumni of the Detroit college of medicine was held recently at the college building, about seventy-five members being present. The business portion of the meeting was held in the large amphitheater. The minutes of the previous meeting and the financial report were read and approved, and the following officers for the ensuing year elected: President, Dr. Benjamin D'Arcy, of Mayville, Michigan; financial secretary, Dr. A. W. Ives, of Detroit, re-elected; historian, Dr. A. P. Biddle, of Detroit. Dr. Angus McLean and Dr. G. L. Renaud, the retiring historian and president respectively, made short and appropriate speeches, and after naming a vice-president from each class since the first one in 1869 the members adjourned to the students' hall, where cigars and refreshments were served and an enjoyable evening passed in renewing old acquaintances.

THE death of Dr. D. Hayes Agnew, occurred at his residence in Philadelphia on the 22d of March, aged seventy-four years. The doctor received his medical training at the university of Pennsylvania, graduating in 1838. He soon abandoned the practice of medicine to engage in business, but the change not proving successful he returned to his profession in 1852. He taught anatomy in the Philadelphia school of anatomy; served as surgeon to the Philadelphia hospital; was appointed demonstrator of anatomy and lecturer on clinical surgery in the university of Pennsylvania in 1863; elected professor of operative surgery in 1870; and appointed professor of the principles of surgery in the following year, which latter position he held until 1887 when he resigned. He was the author of a work on "surgery" which gave him a world-wide reputation. It was finished in 1878, and has since been translated into the Japanese language. The doctor continued in active practice until a few days before his death, and professional overwork and worry are assigned as the causes of his last illness.

AMERICAN MEDICAL ASSOCIATION.—The committee appointed at the last meeting of the American medical association to consider the best means of promoting the prosperity of the sections of the association will hold an adjourned meeting in the hotel Cadillac, Detroit, June 6, at 3 P. M. Members of the committee are requested to notify the chairman of their intention to be present at this meeting. The committee would esteem it a favor if each member of the association would communicate in writing his or her views concerning the best measures for promoting the development of the sections. Such communications may be sent to the chairman of the committee, John S. Marshall, M. D., 9 Jackson street, Chicago.

UNUSUAL WHIP WOUND.—Dr. F. C. Martin describes, in the *Boston Medical and Surgical Journal*, March 17, 1892, an interesting case of wound of the lip produced by a whip-lash but simulating in every respect a bullet wound. The patient, a wagon driver, while passing through a dense crowd of people struck his horse with the whip, at the same instant there was a sharp report and he felt a stinging pain in the chin. He found a wound in the lower part of the chin and another smaller one inside the mouth at the base of the lower lip. The next morning the whole lip was very much swollen and a passage was found from the external to the internal wound resembling the track of a bullet. A small fragment of the whip was found in the tissues.

DISCIPLINE AT BELLEVUE HOSPITAL.—A nurse named Westcott wrote an insulting letter to Dr. Hubbard who has charge of the erysipelas ward of Bellevue. No notice was taken of this until others of the medical staff received similar letters. An appointment was made to meet on Bellevue dock at 8 P. M. Dr. Hubbard carried a valise containing a long coil of rope. He walked to the end of the pier where he had made an appointment with his man. Then the other four physicians who had been hiding in the ferry-house rushed out, overpowered Westcott, bound him hand and foot, threw him in the East river and ducked him several times. Much to everyone's surprise Westcott turned up the next morning for hospital duty, but was discharged.

MICHIGAN COLLEGE OF MEDICINE AND SURGERY.—The annual commencement exercises were held on Tuesday, March 15. Dr. Hal C. Wyman delivered an address to the students, taking the life of Benjamin Rush for his theme. In the evening a banquet was given at the Wayne hotel. The following gentlemen received degrees: Charles A. Blair, Michigan; D. A. Titus, Ontario; Sidney J. Bancier, Ontario; W. G. Young, Ohio; Perry L. Fritz, Michigan; Mont. H. Cassidy, Virginia; A. W. McBrayen, Kentucky; David H. O'Donnel, Ontario; E. T. Milligan, Dublin; Emery A. Bechtol, Ohio; Wm. T. S. Gregg, Michigan; Martha Stevenson Leadbeater, Michigan; Galen Oderkirk, New York; William W. Kergan, Virginia; Robert W. Cooper, Ontario; John A. Kergan, Michigan; Edward La Doucour, Michigan; Frank C. Dunn, Indiana; James W. Squires, Michigan; John Francis Bennett, Michigan; Richard Leuschner, Germany; Martin Victor Meddaugh, Michigan; Eliphalit A. Cornell, Ontario; B. Bertram, Michigan; A. M. Foster, Ontario; R. Q. Snell, New York; Caryl B. Storrs, Michigan; C. J. Annes, Michigan; Wm. Keith, England; Washington Foster, Michigan; R. J. Hamlin, Michigan; Robertson P. Hamlin, Michigan; George Leuschner, Germany.

A BILL to regulate prescription pads has been introduced into the legislature of New York, by Walter G. Byrne, of New York city. It proposes that physicians procure their prescription blanks from health authorities in cities having fifty thousand inhabitants, and that the blanks have a stub attached thereto on which a copy of the prescription shall be made. No restriction is placed upon physicians practicing in cities having less than fifty thousand population; neither does the bill state just what a physician shall do when called to an emergency case if he does not happen to have his pad. The measure is a very impracticable one and should not become a law.

THE Afro-American medical society is an organization recently founded in New York city by colored physicians. Dr. W. H. McKenley is its president. It is claimed that colored patients do not receive proper treatment in the existing hospitals of that city and that professional courtesy is denied colored practitioners at these institutions. It is for the purpose of obviating this state of things that the society has been called into existence, and it will have the double object of advancing race union and establishing a hospital. One colored physician says: "Even when we place a difficult case in any of the hospitals of the city, we are not permitted to participate in the diagnosis of such case except as spectators. Our own cases are removed beyond our control or supervision the moment we transfer them to any of the hospitals, which is proper enough if we were permitted, as other physicians are, to participate in the general consultations and diagnoses. We have no place in the hospital service of the city, and we do not receive the courtesies and advantages that are common to members of the profession."

ADULTERATIONS OF FOODS AND DRUGS.—A bill recently passed the United States senate which provides for the establishment of a food section of the chemical division of the department of agriculture, and prohibits the introduction into any state or territory from any other state or territory or foreign country of any article of food or any drug that is adulterated or incorrectly branded. The duty of the section shall be the analysis of foods and drugs placed upon the market in any state or territory other than that in which they are produced. "The term food is defined as including all articles, whether simple or compound, used as food or drink by man. The term drug includes all medicines for internal or external use; and they are considered to be adulterated when they differ from the standard of strength, purity, or quality recognized in the United States pharmacopœia or other standard works, or when they are sold in imitation of or under the specific name of another article, or when they are mixed, colored, powdered, or stained so as to deceive the purchaser, or when poisonous or injurious ingredients have been added to them, or when, in the case of foods, the article consists in whole or in part of a diseased, filthy, decomposed, or putrid animal or vegetable substance, or of any portion of an animal that is unfit for food." The penalty imposed for violating this law is two hundred dollars for the first offense, and three hundred dollars for each subsequent offense, with imprisonment for one year. This bill does not include articles that indicate a mixture on their label or brand, or such as are unavoidably mixed with some extraneous substance in the process of preparation, or require the addition of a substance to facilitate carriage or consumption.

THE DETROIT COLLEGE OF MEDICINE held its annual commencement March 22. The exercises comprised the customary addresses and much excellent music. A banquet was subsequently given to the new graduates at the Wayne hotel, at which the students displayed their oratorical abilities. The graduating class, which was a large one, was composed of the following gentlemen. The college this year graduated its largest class in medicine and its first class in pharmacy. The following are the names of the members of the two classes: Department of medicine—S. A. Addison, Michigan; G. H. Beal, Ontario; W. S. Brownell, Michigan; J. N. Bell, Michigan; O. S. Bell, Ontario; T. A. Corlett, Ontario; J. E. Campbell, Ontario; H. M. Crane, Michigan; J. M. Croman, Michigan; B. A. Corneille, Ontario; O. Chrysler, Ontario; H. A. Dawley, Michigan; L. S. Eastlake, Missouri; F. P. Eastman, New York; G. Fee, Ontario; R. S. Forsyth, Michigan; J. K. Gilmore, New York; N. A. Goodwin, Michigan; F. L. Hoag, Ontario; R. B. Honey, Michigan; R. Howell, North Carolina; P. M. Hickey, Michigan; A. B. Jordan, New York; L. S. Joy, Michigan; F. W. R. Lapsley, Ontario; T. S. Miller, Ontario; A. McDonald, Ontario; G. S. Miller, Illinois; D. McKay, Michigan; S. McKenney, Ontario; J. R. McCracken, Michigan; F. J. McDaniels, Michigan; H. A. McEachren, Ontario; R. J. May, Ontario; J. D. Matthews, Michigan; E. Orton, Ontario; J. R. O'Brien, Michigan; M. Printz, Michigan; G. R. Pogue, Michigan; N. T. Shaw, Ontario; R. Seaborn, Michigan; A. L. Share, Michigan; N. M. Spranger, Michigan; C. F. Spademan, Michigan; H. B. Strong, New York; G. G. Speer, Michigan; C. L. Stewart, Michigan; L. E. Schell, New York; M. M. Smith, Ontario; T. W. Treharne, Ontario; F. Van Sickle, Ontario; F. B. Walker, Michigan. Department of pharmacy—Augustus Carrier, Martin A. Dettling, Charles T. Gustin, Frank S. Geppert, George C. Hupp, Fred J. Rothacher, Merle Smith, William J. Wagar.

RECENT PUBLICATIONS.

REVIEWS.

THE PRINCIPLES AND PRACTICE OF MEDICINE.*

THE publication of Dr. Osler's practice of medicine has been awaited with much interest. The standing of its distinguished author as an investigator, pathologist, and clinician, have led to the formation of sanguine expectations regarding the value of the work. These expectations will be found to be amply fulfilled in the present volume. While perhaps Dr. Osler's literary style is not characterized by the forcible diction and illustrative facility of the late Dr. Hilton Fagge, his clinical pictures are so fresh and his pathological descriptions so vivid, that the reader is immediately familiarized with his subject.

The classification adopted is not unlike that prevailing in other standard text-books. From specific infectious diseases we pass to infectious diseases of doubtful nature. In this latter department we find descriptions of Malta fever and mountain fever; indeed nothing seems omitted. Then follow sections dealing with constitutional diseases, diseases of the digestive system, and diseases of

the intestines. Then follow respiratory diseases and diseases of the circulatory system. The eighth section contains two hundred and nineteen pages devoted to nervous diseases, and the concluding sections treat of intoxicants, sun-stroke, obesity, and diseases due to animal parasites. The article on phthisis contains seventy-two pages and is an admirable compendium of modern research upon the subject. Speaking of the unity of phthisis he says: "It was peculiarly fitting that from Germany, in which the dualistic heresy arose, the truth of Laennec's views should receive incontestable proof in the demonstration by Koch of the etiological unity of all the various processes known as tuberculous and scrofulous."

The admirable article on Brights disease (unfortunately so named) will be studied with interest, and the excellent sections on affections of the brain substance will also be found of unusual ability.

The work is suited in all respects to the needs of the American practitioner. The local phases of diseases are given due prominence. The text is elucidated by numerous charts and illustrations and the work of the publisher has been accomplished in the admirable style characteristic of Messrs. Appleton's medical library, of which series this volume will now form a most important number.

*By William Osler, M. D., professor of medicine in the Johns Hopkins university and physician-in-chief to the Johns Hopkins hospital, Baltimore. Sold only by subscription. Prices: Cloth, $5.50; sheep, $6.50; half morocco, $7.00. D. Appleton & Company, publishers, 1, 3, and 5 Bond street, New York.

THE MEDITERRANEAN SHORES OF AMERICA.*

A GREAT deal has been written about "the glorious climate of California." Dr Remondino's contribution to the climatology of Southern California will be received with interest. The climatological treatment of phthisis is undoubtedly among the most important, if not the most important of measures for the cure of the malady. Southern California presents a number of varied climates suitable for the different phases of the disease. The book before us will be found an admirable hand-book, and deals freely with the meteorological conditions of the various localities. It will be found an aid to the physician who may be seeking for some health resort for his patient. The illustrations are very striking.

*By P. C. Remondino, M. D. Illustrated. Cloth. The F. A. Davis Company, publishers, Philadelphia.

A DICTIONARY OF TREATMENT.*

DR. WHITLA'S dictionary is bound to be popular. The treatment of all subjects of a medical or surgical nature is discussed in a brief and incisive manner which makes the book very attractive reading. The therapeutical suggestions are standard in kind, and while free from speculative uncertainty are thoroughly modern in tone and tendency. The work is admirable for the purpose of ready-reference and we are unable to detect any serious omissions. The work promises to be well received in America as the present edition has been adjusted to the American pharmacopœia.

*By William Whitla, M. D., professor of materia medica and therapeutics in the Queen's college, Belfast. Revised and adapted to the pharmacopœia of the United States. Lea Brothers & Company, Philadelphia. 1892.

A PRACTICAL MANUAL OF DISEASES OF THE SKIN.*

THE latest accession to the ranks of the physicians' and students' ready-reference series is a practical manual of diseases of the skin by Dr. G. H. Rohe and Dr. J. W. Lord. The spirit of the work is practical and clinical. A few illustrations would have greatly added to the value of the book, but used in conjunction with some standard atlas this defect is overcome. The descriptions of the various lesions of the skin are admirable and the numerous formulæ furnished for the treatment of these disorders makes the work a useful one.

*By George H. Rohe, M. D., professor of materia medica, therapeutics, and hygiene in the college of physicians and surgeons, Baltimore, etc. Assisted by J. Williams Lord, A. B., M. D., lecturer on dermatology and bandaging in the college of physicians and surgeons. Number XIII in the physicians' and students' ready-reference series. Extra cloth, price, $1.25, net. The F. A. Davis Company, Philadelphia.

FIRST LINES IN MIDWIFERY.*

IN this little primer Dr. Herman presents in clear and simple language the elements of obstetrics. Beginning with a brief description of the anatomy of the pelvis, the stages of labor, the various fœtal presentations and their diagnosis, and the management of normal delivery are successively dealt with. The student is told what to provide and how to use his materials, how to care for his patient before and after labor, and is furnished with a lot of sensible information which will be of value to him in conducting his first case. Some wholesome advice is given on the subject of antisepsis, but we question the advisability of recommending the routine use of the vaginal douche post-partum. First-year students will find this little book a helpful "pocket piece." Eighty illustrations serve to elucidate the text. W. P. M.

*By G. Ernest Herman, M. B. (London), F. R. C. P., etc. One hundred and ninety-one pages. Philadelphia: Lea Brothers & Company. 1892.

REFERENCES.

BOOKS AND PAMPHLETS.

"The Indications for Colotomy." By Charles B. Kelsey, M. D., New York. Reprinted from the *Therapeutic Gazette.*

"Trendelenburg's Posture in Gynecology." By Florian Krug, M. D., New York. Reprinted from "Transactions of American Association of Obstetricians and Gynecologists."

"Tuberculin: The Value and Limitation of its use in Consumption." By Charles Denison, A. M., M. D., Denver, Colorado. Reprinted from "Transactions of the Colorado State Medical Society."

"Empiricism, Rational Practice, Practice under Guidance of Law: A Lecture to Medical Students." By Charles S. Mack, M. D., Ann Arbor, Michigan. Reprinted from *North American Journal of Homœopathy.*

MEDICAL PROGRESS.

THERAPEUTICS.

MODE OF PRESCRIBING ARSENIC.

PROFESSOR ERNEST BESNIER, of the hospital Saint Louis, of Paris, has often laid stress on the proper mode of exhibiting arsenic, and holds that the drug is almost every time given in too small doses and hardly ever varying with any patient. Unna, of Hamburg, prescribes arsenic in doses ten times stronger than the French, but keeps the patient under his immediate control. The fact is that in almost every case of skin disease the sufficient dose is exactly the highest amount of arsenic a patient can stand without serious impairment of his general condition.

Arsenious acid is of all such preparations the most easily tolerated. It may be prescribed in the following form:

℞ Diascordium, . . 0.05 centigrammes (1 gr.)
Arsenious acid, . . 1 milligramme (1-60 gr.)
F. One pill. Dispense q. s.

The diascordium is a very good excipient and rather facilitates tolerance for the drug.—*Journal de med. et chir. prat.* J. V. B.

ECZEMA OF THE TONGUE.

SOME affections of the tongue are attended with a desquamative change of the mucous membrane leaving more or less rounded patches which may be considered as being of an eczematous nature. These affections may be treated like the cutaneous lesions by the use of appropriate salves. In a case of the kind Dr. Ernest Besnier prescribed as follows:

℞ Cocaine, . . . 0.05 centigrammes (1 gr.)
Peru balsam, ... 1 gramme (15 grs.)
Boracic acid, ... 1 gramme (15 grs.)
Vaseline, ... 40 grammes (℥ j ʒ ij.)
Misce.

A salve to be rubbed on the tongue several times a day.—*Journal de med. et chir. prat.* J. V. B.

DIURETIC PROPERTIES OF CALOMEL.

THE diuretic properties of calomel have been insisted on several times in previous issues. Dr. Bezous has again taken up this question in his inaugural thesis and introduced a report on several cases across which he came in Dr. Troisier's ward. When calomel is prescribed after certain rules and under given circumstances the flow of urine may increase to four litres (quarts) a day, the mean, however, being two or three litres. This diuretic action is not immediate and generally obtains about the second day after exhibition of the drug. The usual dose varies between forty and sixty centigrammes (six to ten grains) to be

taken in three doses within the day. Doses may however be considerably diminished without impairing the efficiency of the drug. An average treatment should last about four or five days in order to avoid salivation and catarrhal disturbances of the intestinal tract. Two symptoms: (1) The presence of albumen in the urine, and (2) the gradual subsidence of diuretic action, will show that the remedy should not be pushed any further.

The use of calomel as a diuretic is especially recommended for the treatment of cardiac dropsies attended with ascites, œdema, dyspnœa, oliguria, etc., but it may also prove to be very valuable in cirrhotic troubles and nephritis. Favorable results, however, can only be looked for when the cardiac, hepatic or nephritic lesions are not too far gone.

Another important fact which must not be forgotten in the treatment of extensive ascites is the opportunity of a previous paracentesis in order to relieve excessive compression of the ureters. Moreover, some cases will be greatly benefited by the conjoined use of digitalis and calomel, which individually might have been of no use, whereas combined they will show very favorable action.—*Journal de med. et chir. prat.* J. V. B.

TOPICAL TREATMENT OF LUPUS WITH COD-LIVER OIL.

Dr. Filgien (of Nancy, France) reported in the *Bulletin Medical* a case of lupus which had improved considerably by the internal and external exhibition of cod-liver oil. Several other applications, among which iodoform, had already been tried on the ulceration which extended over the forehead and cheek. The dressings were then applied as follows: Over the forehead and cheek was fastened a strip of iodoform gauze imbibed with cod-liver oil, while the eye and lip were dusted with iodoform powder. On the following day the whole ulcerated surface was dusted with iodoform. The treatment was thus carried on, cod-liver oil alternating with powdered iodoform, for about a fortnight when the healing tendencies were manifestly showing. One month later all the surface had undergone cicatrization excepting only the upper lip and the eye which was to be enucleated any way. Another month elapsed when the cure was complete.

Although relating to one single case this report seems to be conclusive inasmuch as all the parts of the lupus which came in contact with the oil underwent a rapid cicatrization, whereas the other parts which on account of their situation could not receive any benefit from the treatment, continued as before.—*Journal de med. et chir. prat.* J. V. B.

ANALGESIA AND ATROPHY OF THE TESTICLES IN LOCOMOTOR ATAXIA.

Dr. Riviere, a pupil of Professor Pitres, has already called attention to the fact that the testicles will often in the course of locomotor ataxia undergo loss of sensibility and sometimes an atrophic degeneration. Drs. Emile Bitot and Jean Sabrazes have recently corroborated these facts and also discussed their symptomatic importance in a study published by the *Revue de Medicine.*

Examining thirty-seven patients affected with confirmed ataxia, they found in no more than nine cases the characteristic pain attending compression of the

testicles. Seventeen of the other patients offered absolute analgesia, the remaining cases presenting unilateral analgesia or bilateral hypoalgesia. In every case the testicular sensibility was so much the more deficient as the other ataxic symptoms were more characteristic. Alongside with the sensory troubles functional disturbances of the same organ have been noted in the shape of impotency, spermatorrhœa and anaphrodisia. A goodly number of the patients have moreover been affected with atrophic degeneration of the testicles.

Analgesia may sometimes, although very rarely, be found in patients affected with other nervous diseases and more especially with general paralysis.

We thus find in analgesic testicles a clinical symptom the presence of which may materially facilitate the diagnosis of tabes dorsalis. It remains to be determined, however, if testicular analgesia is a permanent symptom, or whether it is liable to increase or diminish and even momentarily disappear, as may sometimes be the case with the sensory troubles in the skin.—*Journal de med. et chir. prat.*

MEDICINE.

THE RELATION OF CHOREA TO RHEUMATISM AND HEART DISEASE.

THE relation of chorea to rheumatism and heart disease has always been a subject on which very divergent views have been entertained. The great frequency with which endocarditis is found in fatal chorea makes the theory originally advanced by Kirkes, that the disease is caused by emboli blocking the arterioles of the motor centres, at first sight a very plausible one. That this is the explanation of the mode of origin of a few cases of chorea is probable, but it certainly cannot be the cause of the great majority of cases, for we find that chorea generally sets in without any previous endocardial inflammation.

A recent writer (P. Meyer in the *Berliner Kliniker Wochenschrift*) gives an account of one hundred and twenty-one cases of chorea treated in Henoch's klinik during the past five years. In nine per cent. of the one hundred and twenty-one cases there was a history of rheumatic symptoms, and in ten per cent. heart disease without any rheumatic symptoms was made out. In two per cent. of the cases both heart disease and rheumatism were present. From these statistics Meyer concludes that chorea is merely a symptom which can be induced by the most varied causes. This, however, is only a partial representation of this subject. Any hypothesis which does not take into consideration the functional predisposition to chorea cannot be accepted as adequate to explain its nature. This functional predisposition is necessarily always present. It essentially consists in the want of a due stability in certain motor areas. It is the element in chorea that is inherited, and without which the disease cannot be brought about. It is true that it is possible to have an acquired instability of certain cortical areas, as the result of many diverse injurious influences.

Given this instability of the motor cortex, the causes that may induce choreic movements are very various. In one case it may be simple emotion, in another any internal or external poisonous agent. In the latter class we include the

poison of rheumatism. This poison, then, induces not only this disease, but the chorea and endocarditis. There are no grounds for entertaining the opinion sometimes expressed that chorea causes endocarditis. When the three diseases appear in the one case, it is more than probable that they are induced by some poison, either the rheumatic or allied poison, and in such cases the proper treatment is the treatment of the rheumatic state.—*Gaillard's Medical Journal.*

THE DRUGGISTS' CHECK SYSTEM.

During the recent trial of the ex-medical student Harris, for the murder of his young wife, the wisdom of the check system now employed by most of the reputable drug stores in this city was well shown. Had a single clerk received the prescription, prepared the capsules, and delivered them, it might readily have been claimed by the defense that a mistake had been made by the druggist. As it was, the druggist was able to go on the stand and testify that an assistant had also read the prescription and seen the amount of morphine which it called for properly weighed and dispensed. The importance of the simple precaution in this instance should serve as a warning to all druggists who have not adopted this wise plan whenever prescriptions calling for poisonous drugs are being filled. Only a few years ago a bright young man of this city lost his life by the mistake of a drug clerk, who made him up capsules containing five grains of morphine when five grains of quinine had been called for. The dispenser thought he had the quinine bottle in his hand. It looked like quinine, and if he had suspected himself and tasted it he would have thought it tasted like quinine. He may even have believed that he read on the label "Sulphate of Quinine," but the next day the man who took it was dead, and it was then too late to call a fellow-clerk to look over his shoulder and see if he had read aright. A physician may prescribe a poisonous dose, but the druggist is supposed to act as a check upon his inadvertence and refuse to dispense it. When the druggist has made the mistake, an assistant should stand between him and the patient. No man is infallible, and in dealing with deadly drugs two heads are to be preferred to the single article.—*Medical Record.*

RELATION OF ALBUMINURIA TO SURGICAL OPERATIONS.

In a paper upon this important theme read before the Southern Surgical and Gynecological Association (*Virginia Medical Monthly*, December, 1891), Dr. Long arrived at the following conclusions:

(1) Ether or chloroform rarely injures healthy kidneys.

(2) When renal disturbances occur from the use of an anæsthetic, the kidneys being healthy, they are due rather to prolonged narcosis, exposure of the patient, or perhaps to the combined influence of the operation and the anæsthetic.

(3) A mild degree of albuminuria (or nephritis), especially if recent, is not a contra-indication to the use of chloroform.

(4) Even in the presence of advanced and extensive renal changes, an anæsthetic may be employed, provided the patient or the family be advised of the additional risk.

(5) Of the two anæsthetics usually employed, it is yet a mooted question as

to which is the safer, so far as the kidneys are concerned, unless it be in obstetrical operations.

(6) While it is by no means the rule, profound functional disturbance and even organic lesions may be induced by an operation, apart from the influence of the anæsthetic.

(7) Such renal changes are due to reflex sympathetic action, or to sepsis, or both.

(8) Operations in certain regions—notably the abdominal, genito-urinary, anal, or rectal, are especially liable to produce renal complications.

(9) A healthy condition of the kidney *minimizes*, but does not obviate, the danger referred to.

(10) Albuminuria is always an indication of renal lesions, and should be regarded with distrust, but is not a positive contra-indication to an operation.

(11) When albuminuria is associated with other evidences of advanced renal changes, no operation should be undertaken without candidly stating to the patient or friends the dangers incident to the condition of the kidneys.

(12) Paradoxical as it may seem, an operation will sometimes relieve an albuminuria due to acute affections.

(13) No surgeon is justified in undertaking an operation without first knowing the state of the patient's kidneys.—*Medical and Surgical Reporter.*

PARESIS OF ADOLESCENCE.

CHARCOT'S lecture upon the subject, reported by Dr. Paul Blocq, appears in *Le Mercredi Medical*, February 10, 1892. Diffuse meningo-encephalitis, or general paralysis of the insane, was supposed earlier to belong only to adult life, and to be a disease that never attacked women. Already there are seven well-authenticated cases of paresis of adolescence, exclusive of Charcot's patient, who is a lad sixteen years of age. Among all who suffer from diffuse meningo-encephalitis there is one woman to about every ten men. In women the disease, in its earlier manifestations, bears a close resemblance to paresis appearing at the period of development. There are psychic disturbances, but no marked delusions of grandeur except certain fantastic, perverted ideas that do not require asylum treatment. The condition is one of primary dementia, often preceded by depression.

However uncertain or vague the onset from the psychic point of view, there are physical signs sufficiently characteristic upon which to base a diagnosis. Of these the most important is embarrassment of speech. When the mouth is opened there is a tremor of the jaw and lips, and fibrillary shaking and trombone movement of the tongue as soon as it is protruded. Speech is labored, scanning, and confused. In disseminated sclerosis there is also scanning speech, yet the syllables are distinct and easily understood. In diffuse meningo-encephalitis, the syllables of words run together, and there is a redundancy of *l's* and *r's* that give the characteristic sputtering. This peculiarity is pathognomonic and can seldom be imitated. Occasionally subjects thoroughly bromodized among alcoholics, or those suffering from paralysis agitans, will present somewhat similiar symptoms of disordered speech. A little care suffices to establish a differential diagnosis. Charcot considers this condition so emphatically a

pathognomonic sign of paresis, that he affirms his willingness to base a diagnosis upon it alone, even in the absence of all psychic disturbances. Next in importance is a notable awkwardness of movement, voluntary or automatic, as in walking. The gait is also peculiar. The legs are far apart, the patient falls heavily on one foot and drags the other in walking, the hands are held separate from the body, and there is a dumfounded expression of face. Vibratory tremor is often present, six or eight oscillations to the second, that is somewhat analogous to the tremor of alcoholism or exophthalmic goitre. Then come ocular troubles, inequality of the pupils, and the Argyll Robertson symptom. Toward the closing period of the disease there is more and more helplessness. Paretics then cannot walk, owing to a kind of astasia-abasia, though the dynamometric force of the limbs is in part reserved. The closing scene is that of complete dementia, the darkness of perpetual intellectual night.

The two women and the lad of sixteen, presented the day of Charcot's lecture, manifested the chief foregoing peculiarities, together with alterations in handwriting. In none had there been even mild delusions of grandeur or any melancholia, and in all there was the characteristic difficulty of speech. The boy was perfectly well as a child—bright, happy, and an apt pupil. After leaving school at fourteen, he began an apprenticeship at cravat-making, and shortly after this period his usually distinct chirography underwent a deplorable change. There was loss of memory, depression, stupidity, and general apathy. Family history revealed transient attacks of mental unsoundness in a cousin and alcoholic excesses in the father shortly before the boy's birth. This emphasizes the fact that syphilis or alcoholism may induce paresis as an inheritance. In those who suffer from paresis, Charcot considers syphilis, alcoholism, and overwork exciting causes only, and not in any way essential factors. In the boy, who had already been ill two years, paresis or diffuse meningo-encephalitis developed solely from individual constitutional defect that brought about arrest of development, manifested physically by undersize and deficient force, and psychically by the syndrome of primary dementia.—*Medical Record.*

SURGERY.

THE TREATMENT OF INTESTINAL OCCLUSION BY THE CONSTANT ELECTRIC CURRENT.

Professor Semmola, who is justly esteemed one of the great clinicians of Italy, has recently recorded a case in the *British Medical Journal*, which is interesting for a number of reasons. In the first place it shows that there is a form of intestinal occlusion due exclusively to transient paralysis of the intestines through defective innervation, and secondly that in these cases the constant electric current exerts a marvellous effect. In the case in question the author based his diagnosis of intestinal paralysis upon the following facts: first, the sudden onset of the pain; secondly, the paroxysmal character of the pain, and the freedom from suffering between the attacks, when the abdomen was soft and pressure did not cause any pain; thirdly, the mapping out of the intestinal coils at different points during every attack of pain; fourthly, the intestinal occlusion

which had come on suddenly after the patient had been repeatedly purged, and on the day following an attack of acute diarrhœa; fifthly, the existence of paralysis of the bladder, which had appeared without any apparent cause, so far as the genito-urinary apparatus was concerned, and which has never been recorded as a concomitant symptom of ordinary intestinal occlusion; and sixthly, the neurotic temperament of the patient. When Semmola was called in, the attending physicians had exhausted all the measures ordinarily employed in the medical treatment of intestinal occlusion, without affording the slightest relief, and laparotomy had been advised as a last resort. As the logical sequence of his diagnosis of nervous paralysis of the bowel, the author urged the immediate application of the constant electric current—a proposition which was vigorously opposed by most of the medical men present. A current of a strength of ten milliamperes was applied, the positive pole being carried twenty to twenty-five centimetres up the bowel by means of a rectal catheter, and the negative pole rubbed transversely over the surface of the abdomen, especially in the parts corresponding to the cæcum, the ascending, transverse and descending colon, and the sigmoid flexure, as well as over the hypogastric region. The duration of each application was from eight to ten minutes, and there were three sittings every day. The effects of this treatment were highly satisfactory; by the end of the first day the urinary retention had disappeared, the attacks of pain were less violent, and the patient's general condition had improved, but the constipation still persisted. Encouraged by these results, and despite the opposition of the other doctors who clamored for laparotomy, the author continued the electrical applications and had the satisfaction of relieving the obstruction after the ninth sitting.

This case not only testifies to Dr. Semmola's ability as a diagnostician, but to his courage in acting upon his own convictions, and resisting the demands for immediate laparotomy which seemed justified in view of the critical state of the patient. It also illustrates the necessity of studying each case of intestinal obstruction carefully, with the view of determining the exact pathological condition present. Indiscriminate laparotomies performed in cases which might have been cured by simpler and less dangerous means will certainly not redound to the credit of surgery.—*International Journal of Surgery.*

GYNECOLOGY.

ABDOMINAL DRAINAGE.

SINCE the introduction of drainage by Peaslee in 1855 it has passed without the limits to which he confined it—that of the treatment of septic peritonitis after ovariotomy—and has been carefully and scrupulously practiced by surgeons of both our own country and Europe.

Sir Spencer Wells says: "In my own work I have from the first looked upon drainage as a practice to be *avoided if possible*, and have only put in a tube when I knew I had not been able to cleanse the peritoneum thoroughly, or thought that some oozing was likely to go on after the incision was closed, or when, some days later, I had reason to *suspect* the *presence of fluid in the cavity*. But I soon

began to think the tube acted as an irritant and led to the formation of the fluid which it served to remove. At first when I was in doubt I put in a tube; but very soon when in doubt I left it alone. More than once I was sorry I had not used it but much oftener I was glad."

These statements of Sir Spencer Wells rather confuse than enlighten. Now I do and now I do not. Now I am glad and now I am sorry. Now I wish I had, now I am sorry I did. There is in all this something of the child game of hide-and-seek: "Now you are warm and now you are cold." We find the same scepticism and uncertainty in the following: "I can now add that I have only twice *flushed* or *washed* out the *peritoneal cavity* with *warm water*, and in both cases regretted having done so." But let us take his statistics in the Samaritan hospital as he gives them, "without drainage or washing out the peritoneal cavity with warm water," and contrast these statistics with those of his successors in the same institution. Of his own one thousand three hundred and seventy-eight cases of ovariotomy the mortality was fourteen and thirteen one-hundredths per cent., and he adds: "I am well aware that two of my successors at the Samaritan hospital *drain* much oftener than I ever did, and often *flush*, and they regard both practices as valuable additions to ovariotomy." In four years they had two hundred and thirty-nine cases with a mortality of four-fortieths, less than five in one hundred. The same implied doubts as to the wisdom of drainage and flushing characterizes Mr. Wells' summing-up of his experience: "I think I have learned." We claim for the surgery of the period some certainties. There must be some things that we know or should know. We take the side on which lie the weighty facts. In our surgery we prefer a mortality of less than five per cent. to that of a little over fourteen. We will at any time willingly change our practice to diminish our mortality. We have a brother's genuine pride in the victories of Spencer Wells' surgery. We value the classic gems he has contributed to the literature of the profession; but if there is anything in the logic of facts, then his successors in the Samaritan hospital are entitled to that merit of success with which their practice of *drainage* and *flushing* crowns them. They have the facts on their side.

He put in a tube only when he had not been able to cleanse the peritoneum. It was not adopted as a precaution against very probable, if not certain, trouble, but as a *necessity* to correct evil and avoid its consequences—to avoid the results of the "oozing likely to go on after the incision was closed," and to meet the dread contingency of the presence of fluid in the pelvis. It is to provide against all these contingencies and results that we drain and flush. These agencies combined with the strict aseptic precaution of cleanliness we claim, give the best results—give, as shown by the statistics of the most successful operators, the lowest percentage of mortality. As to irritation of tubes—with clean tube well placed and properly cared for—none can follow. Whether due to suppurating cystoma, dermoids, appendicitis or tubes, peritonitis is always a trenchant argument for section, irrigation and drainage. Perfect cleanliness and drainage are the factors of the whole procedure.

What our English brothers say about this subject is of great interest and value to us all. They have represented the best genius of practical surgery—have been on the skirmish-line of all its advances. But we must beg to take exception to some of their teaching. Keith says: "Drainage is not necessary

in ordinary operations or even in *moderately difficult* ones, even though the amount of *adhesions* be *great*. It is to be used only in the *very bad* operations, where adhesions have been *extensive*, or where there has been *much bleeding* and where there is a *doubt* that this has not all been arrested at the time of closing." We confess we do not fully comprehend the meaning and application of the expression, "where there is a doubt." We can appreciate that charity of the law which gives to the accused the "benefit of the doubt;" but we do not know of any conditions and place in our surgery where doubt should enter in or have a controlling influence. From the beginning to the end we would give the patient the benefit of all doubts by not practicing any. In the application of our doubt where are we to draw the line of distinction between the "*moderately difficult*" and the "*very bad operations?*"

Drainage provides against those complications where doubt would come in. The tube is something bettter than a mere last resort. We recognize the fact of certain conditions, the possibility of others, and drain for their correction, for safety, not trusting to the hazardous suggestions of doubt. Doubt involves hesitancy and delay; they mean prolonged suffering and death to the patient. Mr. Keith further says: "Above all if the powers of life be feeble and the operation has to be finished quickly, before all oozing can be satisfactorily checked, *drainage* is often the *saving of the patient.*" Of his own cases he says: "I think the *second fatal* case might have been saved had a drainage tube been used. There was an enormous amount of posterior adhesion, the adherent surface on the tumor representing a space of thirty by thirty-one inches, but the most of the adherent parts were long enough to allow of catgut ligatures being applied. There were at least seventy of these left inside, and the patient showed signs of feebleness before being put to bed. *I regretted much that I did not drain at the beginning*, for I removed from the pelvis four days after the operation about six ounce of thin, dark blood. Nothing has *surprised* me so much as the amount of almost pure blood that was removed from the pelvis in several of the cases of hysterectomy that were drained. Where it came from in some of them remains a *mystery* to me." The drainage tube is an excellent safeguard against these "surprises"—these "mysteries" which are constantly confronting the abdominal surgeon. It is the contradictions between experience and teaching that surprise us.

The patient recovers, and it is credited to the fact that drainage was not used; she dies, and it is regretted that drainage was not used, thereby crediting the possibility of recovery to drainage. The saving element, it is admitted, has been left out of the case. But this problem, like many others in our surgery, is one of slow solution. We will only get out of these confusions of practice and teaching when we have reached some rule impressed into general practice by the stern logic of many costly experiences. The post-mortem is rather an ungracious, disagreeable teacher, but deals more in truth than rhetoric.

We note in a published statement of hospital work of an American institution a report of fifty-two sections; forty-eight were drained, four deaths. The author elaborates upon chemical libations, and follows with the statement: "I have always drained as I drained in this series, that is, about ninety per cent. I confess that I intend to drain less. What made me drain so frequently was because I had *two* or *three* hæmorrhages, and *two* or *three lives were saved by the*

tube. In one case, in double ovariotomy with a fleshy pedicle, there was severe hæmorrhage, which nearly cost the patient her life. The *drainage-tube told me,* and I opened the abdomen and washed it out, and the patient recovered. There were other cases in which the blood came freely from the tube, and I *felt that life had* been saved by the tube. Having three such cases close together it seemed to me that tying the ligature was not a fine art within my hands and that it was better to drain. In the later cases there has been only one hæmorrhage, and I feel that the hæmorrhage undoubtedly had much to do with one of the deaths. In *any case* where there is the least *suspicion* in regard to the satisfactory character of the ligature, it would be *better to drain.*" Here we have the happy *substitution* of "*suspicion*" for doubt; we have a modest American emulating our English brothers in confusing matters as to drainage. After crediting about all the life-saving he has done to drainage he says: "I confess that I intend to do less." Just what he will then have to "tell him" of trouble he does not inform us. It has not been five years since this same American denied the existence of the angry pelvic troubles for which he now attempts to operate. But the following will be very refreshing to the average surgeon, coming as it does from one with a mortality of nine per cent.: "To go back to drainage. There is one reason why those gynecologists who are opposed to chemical solutions drain more—that is, because they need to. They are not as aseptic as others. They put more infection into the abdominal cavity, and it is necessary that they should provide for the results of such infection. If they did not drain they would have serious results. This fact explains why their simple cases do worse without drainage than their bad cases with it. I believe that what comes out of the tube is clean water in nine out of ten cases. It is the fluid which has been used in irrigation and which has not been sponged away. In the majority of cases I have not taken more than one drachm out at a time. The reason of this is, I believe, because *I sponge out the cavity.*" This careful *sponging out of the cavity,* we presume, accounts for the nine per cent. mortality. In the light of such utterances, to have good results, to save life—"sponge."

A good number of successful operators have lasting confidence in irrigation and drainage; they know well what they can do by what they have done. Uncertain utterances will not shake their faith; they will continue to operate and drain with a mortality below five per cent. And this they will do without chemical solution.—Dr. Joseph Price in *Annals of Gynecology.*

NEUROLOGY.

MULTIPLE NEURITIS.

In *Medicin Moderne* there is an account of several cases presented by Dr. A Frankel, who quotes Leyden to the effect that the central nervous system can take part in multiple neuritis. Recent investigations have demonstrated that not only the gray matter of the cord but the white substance also may be involved as in locomotor ataxia. Phal has shown that multiple neuritis is a toxic process involving different parts of the nervous system; and this makes correct diagnosis often difficult and sometimes impossible, for there are similar ataxic and neuritic symptoms in multiple neuritis and tabes. The neuritic manifestations of the

latter disease have been carefully studied and noted by Dejerine, Jolly, and Goldscheider. The first history Dr. Frankel recountered was that of an alcoholic patient fifty years old, who presented, besides the usual symptoms of neuritis, well-marked amnesia. Psychic phenomena are rare in neuritis and must be classed among brain lesions. This patient's general condition was bad, there being considerable prostration, as in brain troubles generally. There was gradual sinking and death. The autopsy revealed a softening of the myeline of the peripheral nerves, and a normal spinal cord. The second patient was a dwarfish little fellow of fourteen, of extremely light weight, who, under the influence of proper food and exercise, nearly doubled his weight in less than twelve weeks. The movements of the legs were awkward, walking was difficult, and the left arm was completely paralyzed. There was such marked atrophy of the muscles as to suggest progressive muscular atrophy. In the third case, a coachman, there was tubercular neuritis with complete paralysis of the lower limbs, paresis in the arms, hoarseness due to paralysis of the vocal cords on the left side, and intense pains. Well-regulated diet caused all these symptoms to disappear, though the tubercular condition of the lungs remained the same. In the discussion which followed, Dr. Goldscheider remarked that implication of the cranial nerves was a rare thing in multiple neuritis; in one instance he had seen the motor oculi involved, and in another tachycardia, due to a lesion of the pneumogastric that was later followed by left-sided optic neuritis. Dr. Leyden then said that in his first work he had objected strongly to any dogmatic separation of peripheral nerves and the central system in their relations to multiple neuritis. A poisonous agent could simultaneously attack these two systems of nerves. According to his personal observation, anatomical lesions of the central system were found only in the ganglionic cells. There might also be disseminated lesions in the gray matter. Up to the present time he had found none in the white. Also, it seemed unwise to draw too deep lines of demarcation between nerve and muscle, for in this disease there might be primarily a myositis. The anatomical nerve lesions in multiple neuritis present some variety. There may be abundant proliferation of cells impinging upon nerve substance and upon the nerve sheath. Or degeneration of the nerve may occur and disappearance of myeline. This is the inflammatory form. Acute ascending paralysis should be classified as a multiple neuritis. The toxic agent first disturbs the function of the nerve, and this is followed by nerve degeneration. Whether multiple neuritis ever attacked the cord or not, Dr. Leyden was unable to state, never having encountered cases wherein tabes or myelitis had immediately followed this particular abnormity. Nevertheless, such a sequence was by no means an impossibility.

MEDICAL MELANGE.

One Breast or Two.—In a recent number of the *Lyon Medical*, Sabaite referred to some observations he had made upon the mortality of infants nursed by women who for some reason used only one breast. He found that the death-rate is much higher in these cases than in those where both breasts were employed. In thirty-two of the former, among hospital patients, the infantile mortality was forty-eight per cent.; in the same number of the latter, under similar circumstances, the mortality was but twenty-eight per cent.—*Medical Press.*

THE SALT SHIRT.—Dr. R. E. Nelson writes to an exchange as follows: "I read an article some time ago on the remedies for night sweats, in which the writer omits one which I consider as, *par excellence*, the best of any I have ever tried, and which is a 'salt shirt,' prepared by immersing the shirt in a saturated solution of common salt, drying it thoroughly and having it worn next to the skin on retiring for the night. I have succeeded with this remedy, after the failure of all others.

TEMPORARY BLINDNESS DURING LACTATION.—Nettleship (*Ophth. Hosp. Rep.*, XIII, II, December, 1891) reports several cases of temporary failure of sight in women during lactation. These cases are distinguished from those of retinal disease due to the albuminuria of pregnancy, and also from those in which blindness results from severe post-partum hæmorrhage. He has not seen any of the cases he describes during the time of blindness, but the ophthalmoscopic appearances present at various periods after the attack, point with more or less certainty to a previous optic neuritis. He believes that these cases will probably be found to belong to the same group as the optic neuritis now and then met with in chronic anæmia.—*British Medical Journal.*

STRONTIUM IN BRIGHT'S DISEASE.—C. Paul (*Sem. Med.*, November 18, 1891) has made a number of observations on the action of strontium salts both in man and in animals. He first employed the lactate (prepared by neutralizing a ten per cent. lactic acid solution with strontium hydrate), but has latterly employed only the bromide and nitrate. As a test of their purity these salts should give no precipitate with chromate of potash. He corroborates Laborde as to the innocuity of these salts. Guinea-pigs will bear from fifteen to twenty centigrammes given hypodermically, and much larger doses of the mouth. The salt can then be found in the liver, bones, urine, and fæces. From observation in a very large number of cases he concludes that strontium is indicated, and gives very good results, in certain varieties of nephritis—parenchymatous, rheumatic, strumous, and gouty; it is also useful in the nephritis of puerperal or pregnant women, etc. Up to the present it has appeared ineffective in interstitial nephritis and in the renal lesions of tuberculosis or syphilis. Lastly, when the renal affection has arrived at the period of insufficiency or uræmia strontium is utterly useless.—*British Medical Journal.*

GASTRIC HEADACHE.—Dr. Westphalen has found that toxic substances in the stomach under certain conditions are capable of producing, through absorption, disturbances of circulation in the central nervous system and its associated parts which result in headache. A complete absence of hydrochloric acid in the stomach contents was found, and when this acid was prescribed complete recovery followed. The theory advanced for the beneficial action of this drug is that ptomaines or toxines of micro-organisms exert an injurious influence only when there is a deficiency in the quantity of free mineral acid in the stomach. Headache may also be prevented in such cases by administering the acid directly after the patient has eaten articles which have previously always followed by headache. The nature of the noxious substance is at times obscure, as in instances where indigestion, headache, and urticaria follow the use of chocolate or strawberries, but in such cases also hydrochloric acid acts well.—*Berliner Klinische Wochenschrift*, Number XXXVII, 1881.

A NEW REMEDY FOR RHEUMATISM.—According to the *Lyon Medical*, October 25, 1891, Dr. Betchine, of Saint Petersburg, has made special studies in reference to *ephedra vulgaris*, a plant much esteemed by Russian peasants for its anti-rheumatic qualities. The bark and the root the observer found efficacious in acute articular rheumatism with high fever. In chronic rheumatism its most favorable action was merely a slight temporary amelioration. Unless fever is present the drug is not especially used.

FOR THE CURE OF INSOMNIA.—A lady writing in *Lippincott's Magazine* says repeat twelve times the following:

Like the passionate palm that breathes all the odors of day
To the soul of the night;
Like a river that runs and frets on its turbulent way
To the quiet deep;
Like the swallow, weary of cold, that southward gleams
To her land of delight,
So the heart overfull of its sorrow flows over in dreams
Of compassionate sleep.

A LOW VALUATION OF A CONSULTANT'S SERVICES.—An eminent Boston surgeon, says the *Boston Medical and Surgical Journal*, was called in consultation to a neighboring city. His services consisted of two journeys to that city and back, the aspiration of a tumor, the examination of the contents by an expert pathologist, and the necessary correspondence. The bill rendered the estate, an estate which was said to be ample, and understood to be so at the time of sending the bill, was for one hundred and five dollars. It evoked the following reply from the executor of the patient's will: "Had I been prostrated to the ground by a thunderbolt from the heavens on a clear summer day and retained sufficient consciousness to have realized it, the shock would not have been much greater than that which I received as I looked over the bill you sent me against the estate of Mrs. ——. I knew that Dr. ——, of this city, had consulted a Boston physician, and I have recently paid his bill, amounting to one hundred and ninety dollars, which I supposed, of course, included the pay for your services (and which I hope may be the case); and even at that I thought the bill was *tremendous*. I feel that Dr. —— did *very wrong* in entailing such an expense, in calling you, as he had previously told me that Mrs. —— could not possibly live *over* three months; and it seemed to me that if any examination was to be made, you would both have been amply repaid by whatever information you may have gained thereby; and I cannot refrain from saying that I think the call upon you was wholly unnecessary, and, even if it had been, that your charge for your service was *unjust* and *beyond all reason;* for I do not believe there was ever a human being who possessed sufficient knowledge or ability to make his services worth one hundred dollars a *week*, while yours was only rendered for a few hours upon a lonely, feeble and emaciated old lady to whom death was not only a relief, but a great blessing; and if I *have* to pay your bill, I shall be obliged to take all the time the court or law allows; as if any more unexpected bills come in, there may not be any "residue" to pay to the comparatively poor young lady who is to receive what remains after the estate is settled. You may think my language emphatic, but I can employ no milder terms in giving expression to my feelings and opinions."

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

IS THE PHILOSOPHY OF ELECTROLYTIC ACTION IN THE CURE OF DISEASE WELL FOUNDED OR NOT?*

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Many empiricists who have generally pursued a knowledge of facts by observation and experiment purely, have without any reservation taught us many valuable cures, which stand out to-day as bold scientific truths, which we as medical scientists must admit. Yet we hardly ever rest satisfied with any new endeavor without either acquainting ourselves with it, or consulting first the record of precedence, especially if we imagine there is even a grain of critical evidence recorded against it, however untenable the position taken. This aggressive opposition is well founded, for it bears the marks of genuine fixed principle —that of trial and investigation. That which cannot withstand the test of inquiry and due examination, whatever the assurance of the article is not worthy of scientific place, much less notice; for principles worthy of merit will always outwit the skeptical disbelief of any disgruntled circle in the end. But nevertheless many new systems of treatment which have already withstood the trials of an actual practical scientific inquiry, and which bear the stamp of recognition as potent factors in the elimination of disease, have been frequently and unmercifully assailed by a biased and incredulous few, as not only being worthless, but needlessly harmful to the very cause for which they have been espoused, when in point of fact, as is well understood, such assault not only bears the brand of ignorance and superstition, but a natural feeling of aggrandizement owing perhaps to some pet puerile scheme of their own, or worse, jealousy; for the practical and conscientious observer judges long and well and sets at rest all inconsistencies by the magic of his understanding.

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Every medical community, however settled a question may be—as that of vaccination, for instance, as an actual neutralizer of small-pox,—is confronted on every spirited occasion by the shallow arguments of what would be a dominant few, who naturally pose as special conservators or curators of our scientific medical body politic; never believing that that which is already placed in the curriculum of advanced science is scientific or practicable unless placed there by themselves or coadjutors. This attitude, I repeat, is conspicuous in every medical circle, but should not be; for ours should be to know the *reason why* by intellectual interpretation and experience, based upon unselfish motives and genuine advancement, whatever the source of the proposition instituted, or claims advanced.

From this we judge that the condemnation of practical results of any new system of treatment, especially by those inclined to prejudice or to simple inexperience, is not a fair presumption nor a clearly defined antecedent implication, but simply an arrangement of primordial inference depending upon preferred agreement. Indeed such are our conclusions after terminating into facts, which alone are sufficient for the defense we are now making of electrolytic action in the cure of disease. But in our deliberations we shall try and be studiously thoughtful and scrupulously truthful, and ever mindful to wield our mental actions in the cause of correct principles and in the defense of the exceedingly valuable performance which chemical absorption has accomplished thus far in the removal of various diseases, and to prove that it is a potent agent in the hands of the educated that is worthy of great merit and trial.

It is a well-known fact, and one worthy of further consideration by every electro-therapeutist, that certain well-defined primary changes take place at either terminal of a battery, whenever any organic compound is subjected to it. Several years ago, this was fully demonstrated by H. Davy and Tripier. In their experimentation they demonstrated to a nicety that if, for instance, the ends of a piece of meat were dipped in different vessels containing distilled water and having them connected to the terminals of a good working battery, sulphuric, nitric, muriatic and phosphoric acids would generate at the positive pole, and at the negative, potassa, soda, calcium and ammonia. This definite character of electro-chemical action is also observable in the living tissues, though greatly modified by the quantity of liquid salts they contain, and on account of this the density of tissue structures may be poor or good conductors. For, what Professor Amory has so well laid down in his admirable book, is quite true here, that "the resistance of the tissues to electro-chemical action is inversely to the proportion of fluids which the tissues contain." So it is, that successful electro-chemical treatment depends largely upon the pathological character of the existing structure. Some of the fibro-cellular or connective tissue growths, composed of a firm, dense, fibrous tissue, such as constitute tendons, are with difficulty influenced by electrolysis; while the adenomata being laxer and less fibrous in texture, consisting of numerous small saccules lined with epithelial cells and blood-vessels; or the papillomata which usually spring from the mucous or serous surfaces supporting blood-vessels by connective tissue; or even the angiomatous growths which support their vessels by connective tissue too, submit very readily to the influence of the galvanic current. Indeed every inflammatory new product is easily removed by this treatment; for naturally—owing to their low vitality

—they undergo retroversion changes, though their tendency is gradually to approximate a healthy condition which is not so with slow inflammatory growths. But in each and every class of tumorous structure the unalterable acid and alkaline reactions occur at the respective positive and negative poles. Indeed this is significant when we explain fully the great difference between the result of their local effects, and the lesson it teaches us in its application to diseased tissue.

At the point of contact of the positive terminal on the moistened skin, from a powerful caustic current, the eschar resembles greatly that formed by strong acid caustics, and the inflammation which it excites in the contiguous parts gives occasion frequently to secretion of pus between the living and dead tissues, which on healing produces a hard retracted cicatrix, showing that it is fibrous in character; while at the negative contact the inflammation to all appearances appears like that produced by rubefacients with only slight collection of serum beneath the blistered skin, and that on healing the cicatrix can hardly be called one, for it is soft and skin-like to touch and now adherent to the subjacent tissues. This apparent functional property of the respective poles, suggests in great measure the one best adapted in the absorption of the pathological lesions and *vice versa*, for whenever the resistance of the conducting medium is overcome by the electro-chemical current, consolidation of the tissues occurs at the positive and fluidization at the negative terminal, and though the *modus operandi* and the extent which tissues undergo chemical transformation are not explainable, it is certain that the transmission of electrical currents through hypertrophied or other abnormal structures produces immediate disturbance and their ultimate absorption. This is due no doubt to the arrest of the blood supply, which necessarily curtails the nutritive properties. As an illustration let us study from actual clinical experiment, or rather experience, the mode of action electrolysis has upon a simple hypertrophied growth of considerable vascularity; for by doing so we may be able to construe a correct interpretation of laws governing electro-chemical action in living tissues.

Mr. H., plumber, forty years of age, presented himself for nasal inspection and treatment, six months ago. On examination I found large hypertrophied growth situated on left turbinated body. Having implicit confidence in chemical absorption, inserted both positive and negative needles in growth, four lines apart and under a current strength of thirty milliamperes. After ten minutes direct application, recognized around the negative needle a continuous current of gaseous bubbles which rapidly developed into a watery fluid; showing of course that water in the tumor was transfered by electrical osmosis from the positive to the negative pole. Nothing but black scales of peroxide of iron appeared to collect around the positive, though immediately surrounding the point of insertion of the needle, the tissues were shrivelled, as if acted upon by some powerful caustic; showing that oxidization of the needle occurred from the oxygen of the blood and tissues, which liberated the acids (sulphuric, nitric, muriatic and phosphoric), but in such a modified degree that only slight local inflammatory action occurred in vicinity of point of insertion. At this sitting twenty minutes were occupied; but from that moment to this not a semblance of the growth reappeared, nor the slighest sign of a bound cicatrix, which follows so frequently the use of the ecraseur, electric galvano-cautery and knife. From

this we notice that as much or more depends upon the absorption of the fluids which the existing structure contained, as upon the caustic effect of the generated acids. Indeed, I am fully persuaded, and that after a careful consideration and rather long studied experience with the galvanic form of electricity, that more depends upon the absorption of the liquid matter contained in diseased structures—which naturally husband white corpuscles and other reparative molecules, —than to electrolytic action, though it is supposed to interfere with both the vital and chemical energies of living cells. But this transportation of liquid particles from the positive to the negative pole must necessarily produce chemical decomposition of the cellular substances in the electrolyte; for just as soon as functional activity of cell life ceases, by any process, its existence is cut off by the execution of chemical laws. But in electrical osmosis we know definitely its accomplishments,—that around the negative terminal there accumulates saline fluid, the essential elements which convey the nutrition and support the metabolism of cellular tissues.

This electrical osmosis of the fluids in the tissue is not due to absorption by physiological stimulation, nor to escharotic action which many think, but to the molecular attraction induced by the force of the galvanic current from the positive to the negative electrode. Since this osmotic action tends to interfere with the proliferation and propagation of healthy tissue cells, when current strength is sufficiently intensified to induce it, it is reasonable to suppose that a similar current will act more readily upon the cell processes of lower vitality, because tumorous structures in general are usually more vascular, and are dependent principally on the reflected influence of vital energy for existence. This leads us then to perhaps the more important study of its application to diseased tissues, because the indications of its use are governed by certain definite facts which clinical experience has fully demonstrated. These are for the most part hypertrophies, namely, the numerical and simple variety, the one due to an increase in number of its histological elements, the other to simple increase in size; also neoplastic growths and inflammatory deposits resulting from inflammatory action in connective tissue or its equivalents; also the exudation processes in connective tissue, muscles and tendon-sheaths, diseased joints and in general plastic infiltrations, goitre, and vascular tumors, and in all the general erectile growths and parenchymatous tissue of an abnormal character; and to the diseased conditions of the vessels of both the arterial and venous systems, including capillary anastomosis resulting in nævi. But the method of its application and the choice of the position of either electrode in any of these enumerated diseased conditions will depend greatly upon the quantity of current we wish to convey to the abnormal structure for electrical absorption. As an illustration let us take, for instance, if we wish to electrolize an erectile tumor, a typical case of which happened to come under my notice about a year ago.

The patient was a boy of fourteen years who had an erectile growth the size of a hazel-nut situated in region of the cervical glands of the left side of neck. Two electro-positive and three electro-negative needles were inserted in body of growth about five lines apart and under a current strength varying from ten to forty milliamperes, which occupied fifteen minutes' duration. Now the degree of excitement which it produced, though the resistance offered by the growth was comparatively little, varied according to the increase of the current tension.

Under ten milliamperes very few gaseous bubbles appeared to collect at negative needles, while at the positive not the slightest caustic effect was experienced, nor the faintest sign of deposit of peroxide of iron. But just as soon as the tension of the current was gradually increased until twenty and forty milliamperes were registered—which was not further increased owing to its decided effects, though it was quite bearable to the patient—very decided impressions were observed, namely, redness of the surface of the growth around the points of insertion of the electrodes; gaseous bubbles and frothy watery secretion occurred in goodly quantity at the negative needles, while a slight shriveling of the tissues was denoted at the positive. Three sittings of fifteen minutes' duration were all that was necessary to destroy this growth and restore the parts to healthy normal condition without producing the slightest scar deformity. But it will be observed that the current was increased only to that point of current tension which showed evidence of electrical osmosis and chemical change in diseased structure, and not to the feelings of the patient, for at forty milliamperes no caustic effect or burning sensation was experienced, nor any inflammatory action resulted therefrom, which invariably follows the long continued use of the high tension or stronger current which frequently provoke suppurative processes, or stimulate the abnormal tissue to further enlargement. Feebler currents of longer duration, especially in electro-punctures, are much more preferable, for they radiate through the electrolyte with an evenness of disposition which mitigate against inflammatory violence, and yet provoke decisive chemical decomposition. Indeed, I have found, and also those familiar with electrochemical applications, that strong galvanic currents are very apt in bodies offering high resistance to display the greater portion of their energies around the immediate contact of the electrodes, which necessarily excites inflammatory action in neighboring tissues; while the feebler ones will often produce the desired chemical effect without endangering the natural processes of the healthy organism. This is particularly so in vascular tumors or other diseased conditions located in close proximity to serous membranes, because it can be applied without causing the least suspicion of inflammatory danger, and yet induce sufficient disturbance of their functional developing properties, that will necessarily result in their death and ultimate absorption.

As an illustration of this, I have a case in mind of Dr. Jenks. The patient, a lady, was young and delicate, and when first seen by the doctor showed all the evidence of having suffered for considerable time from idiopathic anæmia. Indeed so anæmic the mucous membrane of the nose appeared when I first saw her—being a month or more then under treatment by Dr. Jenks—I was cautious enough not to interfere with the cause of her nasal obstruction, namely, polypi; for the pale whitish color and the laxity of the tissues, and having a thin deposit of cold looking liquid fluid on the surface, indicated to me an extremely weak condition of the tissues, as well as evidence of decreased vascularity, which would undoubtedly, on the slightest irritation or abrasion, have induced sloughing and extensive ulceration of general nasal structures. But the principal difficulty she was laboring under, which required Dr. Jenks' ingenuity to eradicate, was a large mass of inflammatory deposits located in the region of right ovary which confined her to her bed for several months. The true character of the tumor was certainly hard to make out at first, as there was no genuine basis to render proper diag-

nosis. Yet, confident he was that it was the cause of various reflex symptoms which not only depressed her mental feelings, but impaired her physical condition to such an extent that she was unable to walk; and that if relief were not soon obtained she would succumb sooner or later to its morbid influence. Every known medical and surgical procedure were thought of but none proved applicable, owing to her anæmic condition. The use of galvanism was at last resorted to and its peculiar manifestations were from time to time noted, which are of special interest to us now, for it bears upon the point at issue. The positive needle was inserted in the deposited mass, with common negative pole applied over the region of the umbilicus, under a rather mild caustic current, for several seances, with an intermission of a few days between each. The result of these electrical dosages was not satisfactory; for no particular change took place in the morbid substance to denote its absorption, but on the contrary it appeared to be stimulated, as its disposition tended to increase its vascularity, and much more tenderness existed now than before, while under and around the immediate contact of the negative electrode—though during the time of the applications little burning sensations was experienced—large eschars resulted as if they arose from mortification of a part. But the inflammation which it excited in the contiguous parts did not occasion any pus-like secretion, yet the escharotic crusts took months before they completely separated from the living tissue. But this did not dismay the doctor in the least, for he became satisfied the low state of her physical condition would not permit the use of even an ordinary current. And being quite familiar with electrical dosage, he resolved to use a much feebler one of longer duration which ultimately proved of great advantage. The large deposition mass, after months of regular treatment, quietly submitted to electrical absorption without causing the slightest eschar of the umbilical skin. Now had the doctor been at all negligent in the administration of this subtle fluid, or ignorant of its manifestations in certain pathological conditions, the morbid inflammatory deposits would have in the first instance increased, which would eventually have induced at least an acute local inflammatory peritonitis and perhaps a general peritonitis, resulting in death. Indeed, from personal experience, I have learned to exercise great caution, especially in anæmic patients, lest I should set up undue excitement in neighboring parts, even by a gentle current, for I have discovered to my entire satisfaction, that strength of current plays a very important role for good or for evil under certain abnormal conditions. This is particularly so in all subacute inflammatory troubles, whatsoever their origin or character of tissues involved. Because the occurrence of certain local morbid changes observed in the inflammatory process,—as in the increased flow of blood and exudation of the liquor sanguinis, with migration of blood corpuscles, resulting more or less in the impairment of the nutrition of the infiamed cellular elements—would naturally increase the alterations of the nutritive properties and accelerate the blood flow to the injured part, which might result eventually in blood stasis, and subsequently in acute inflammatory action.

Hence I am fully persuaded, as well as many prominent electro-therapeutists —like that of Apostoli, of Paris, who bears the reputation of being not only a practicable, but an ideal electrical scientist,—that in all diseased structures resulting from inflammatory deposits, their abnormal character cannot be modi-

fied by either the high or low tension currents while under the process of acute inflammatory action. This holds good in all acute inflammatory diseased processes, whether they result from idiopathic, specific or traumatic origin. For the reason that as the alterations which the inflammatory processes induce in diseased structure, namely, the exudation and effusion of serum—containing variable amounts of albumen, fibrin, blood, mucus, leucocytes, and bioplasm or germinal matter, with considerable quantity of phosphates and chlorides—so as to amend the existing breach however formed, it would inevitably become, by any electrical dosage, over-stimulated, which would naturally tend to aggravate the inflammatory exudation and suppuration, as well as hasten the process of the disease itself to genuine purulency by so sudden a resolution. Yet I am certain that just as soon as the active inflammatory stage is past, when the disturbance of the vital and nutritive relations between the elementary tissues are at an end; and that when the accumulations and deposits of the inflammatory products supervene, which must necessarily interfere with functional properties, as for instance, thickening of the mucous membrane of any part of the urethra by the deposits of fibrous plastic material producing obstruction to the flow of urine, galvanism can be applied directly to the indurated surfaces, if properly administered with perfect safety, and with results guaranteeing absolute satisfaction.

These few explanatory points may enable us to perceive in proper form the mode of action of the galvanic current and the real necessity of its use in certain pathological conditions. At least I am positive that its applications intelligently administered in various neoplastic growths, erectile tumors, lympathic enlargement, resulting from interstitial deposits of lymph, and other structural abnormalities arising from organized inflammatory matter, as is witnessed in nearly every urethral and œsophageal stricture—have been attended with good results. But as the old saying goes, "the proof of the pudding is the eating thereof," is rather applicable here. For clinical evidence has convinced me, not only of its unique performance, but of its valuable therapeutic property in the destruction and absorption of morbid structures. And though it is not the province of this paper to indulge in any clinical report, yet you must forbear with me, for sake of argument, while I enumerate in a brief tabulated form, the several varied cases which happened to come under my notice since 1887, just five years ago,—when I read my last paper on electrolysis. This will show what chemical absorption has accomplished under my immediate observation, and will prove from actual experience, what I affirmed in the outset, that its success is an established fact in the hands of those capable of administering electrical dosages. Though many perhaps are in doubt as regards its osmotic action, resulting in chemical disorganization in the electrolyte, I am not alone in this vast domain of electrical research, pursuing by systematic object lessons the study of its influence on morbid structure, but have good scientific company in this and other countries, "who all rejoice in similar good successes."

Now in this field of clinical observation I have, since the year 1887, made a practice of carefully noting each case with history and number of electrical dosages to date, which are here briefly tabulated, with actual results. But I wish to mention these are reserved for future detailed reports, particularly the œsophageal stricture cases:

Nature of Disease.	Number of Cases.	Average Dosages.	Results of Treatment.
Angioma (or nævus),	27	10	All cured.
Erectile growths, variously situated,	35	8	All cured.
Fibroid growths, variously situated, but principally in region of posterior nares and pharynx,	18	16	15 cured. 3 improved.
Gonorrhœa, chronic,	60	12	All cured.
Gonorrhœal orchitis, chronic,	15	7	All cured. 17 cured.
Goitre,	23	25	5 improved. 1 not improved.
Indolent inguinal buboes, chronic,	45	15	All cured. 6 cured.
Lymphadenoma,	8	12	2 improved.
Enlarged prostate,	14	10	All improved.
Condyloma, syphilitic,	4	8	All cured.
Lupus exedens of external nares and upper lip,	2	30	Both cured. 18 cured.
Nasal and pharyngeal polypi,	22	18	4 relieved.
Papilloma—warty, of larynx,—base of tongue, pharynx and nares,	60	6	All cured.
Sarcoma, in larynx and œsophagus,	2	42	1 improved, cure. 1 had no impression and resulted in death.
Indolent ulcers, variously situated,	11	17	All cured.
Gonorrhœal ulcers, after failure of other treatments,	9	11	All cured.
Enlarged sebaceous follicles of skin,	15	4	All cured.
Hæmorrhoids,	8	8	All cured.
Enlargement of testicles and epididymis, caused by mumps,	2	12	Both cured, or reduced to normal size.
Varicocele,	1	18	Cured.
Œsophageal stricture,	8	28	7 cured. 1 died, which proved to be a sarcoma situated in cardiac end of gullet.
Urethral stricture,	165	20	140 cured. 25 much improved.

The variations of the number of electrical dosages, even in same class or character of disease, were partly due to the peculiarity or idiosyncrasy of the patient, but mostly to the difference of the resistance which the current meets in each pathological case. Some were firmer, denser and less vascular than others, and required longer, steadier electrical stimulation—without injuring the healthy organ. But just as soon as an electrical force was sufficient to induce a decided hyperæmia in either case, osmotic action took place, which deprived the parasitical cellular substance of nutritive support, which resulted in

their death and ultimate chemical absorption. Indeed, it is a histological fact that cells of low formation have greater resisting power than the cells of rapid growth. And that which I have said in a former paper is true now, "that as abnormal structures of fibroid character possess in no small degree the tenacity of the natural fibrous tissue cell—both consisting of a homogeneous mass of wavy interlacing fibers of ultimate strength and vitality—it is reasonable to suppose that a greater intensification of electrical fluid is required to disturb their functional capacity than those constituting the myxomata, myomata, papillomata, adenomata, etc., because their conductivity is not equal." Hence it is difficult, yes, impossible, to approximate a uniform system of quantitative electrical treatment. We have to determine from actual clinical experience the amount of electrical force required to establish chemical changes in the pathological lesion. Hence no rule can be laid down for either the inexperienced or experienced, though the latter, from much wider observation, can detect its primary impressions sooner, and utilize its resolvent properties to better and safer advantage.

Now this tabulated report may seem rather exaggerated to some of you, inasmuch as it shows that during this time I had treated by electrolysis five hundred and sixty-six cases, and all suffering from the various pathological conditions enumerated, with results defying any other system of treatment in like comparison. But I assure you it stands correct; and that each case was studied with a careful measure of observation, with the view of determining its true osmotic and chemical absorbing qualities, and the comparison I might draw from its clinical effects with what other medical electricians obtained. I am truly conscious of the import of my remarks. I am sensible of its intended significance, that of bringing to your minds the importance and careful study of the peculiar phenomena which electricity displays in diseased tissue. And though too much caution cannot be exercised in its use, yet I am justified in saying we have in it a weapon which is a most powerful destroying agent, but fortunately when curbed by the hands of those experienced in its manifestations in organic structures, becomes a harmful and useful engine, possessing the essential property of osmotic action and chemical absorption.

ECTOPIC PREGNANCY, WITH REPORT OF CASE.*

By ARTHUR BENNETT, M. D., Detroit, Michigan.

I present this case for you, to-night, hoping that it will, with the discussion, materially aid you to a timely diagnosis of the most grave, most horrible and painful condition that female human flesh is heir to. That many skillful physicians have made a mistaken diagnosis in this trouble is beyond question. The death certificate has been signed, the patient buried beneath the ground, and the whole subject of ectopic pregnancy forgotten. Happily the spirit of chivalry is not entirely gone, and such men as Price, Tait, and others, have laid this subject so plainly before us that it is now a much easier task to make a diagnosis than in former days, and with the light already thrown on the subject it behooves

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us as general practitioners to look about us and become familiar with the symptoms, diagnosis and treatment, for who knows what hour or minute they will be ushered into the presence of this fearful condition. There is no condition in which the life of the patient is in so much danger, yet nowhere in the whole realm of surgery or medicine have the results been so brilliant and satisfactory in cases where the diagnosis has been made and proper treatment instituted in time.

I will not take up valuable time in discussing the cause of this trouble or in describing the various kinds of ectopic pregnancies, unless it be to state that the case I report to you to-night was considered by me and those that saw it an excellent example of ovarian pregnancy, and that this is a condition considered by many authorities as next to impossible. There is a difference of opinion between Price and Tait in regard to the existence of the intra-ligamentous variety, which is supposed by Tait to be a tubal pregnancy rupturing into the broad ligament. Price has operated some sixty-two times and says that he has never met with this intra-ligamentous variety but that he rather considers that all extra-uterine pregnancies are tubal, and that when rupture takes place, they rupture directly into the peritoneal cavity, and that the intra-ligamentous variety of Tait's is only inflammatory membrane or capsule surrounding the fœtus. The fœtus, he thinks, grows after this rupture surrounded by the inflammatory exudate or capsule.

It does not concern us materially which of these views are correct; what is wanted by the general practitioner is to be able to recognize the trouble and treat it; if not to get some competent surgeon in time to treat it for him. It is an easy matter to understand that it is next to an impossibility to make an absolute diagnosis of extra-uterine pregnancy before a rupture takes place, and the best thing we could do, if we could bring ourselves to think of a sure case, would be to make an exploratory operation to clear up the diagnosis, or submit the case to some specialist for this purpose.

After rupture takes place and the hæmorrhage has gone on to an alarming extent we have not time to theorize or to guess at a diagnosis. We cannot say we think, or we are positive the patient has a severe case of colic, and give an opiate. We must be positive. We must act and act immediately. We must either operate ourselves, immediately, or get some one to do it for us; and to do this we must ever be on the watch for the alarming symptoms which will never fail to present themselves. Now, to enable you to glean a little more light, I will report two cases, one my case that died, and one Dr. Price's case, reported by Dr. Cordier, that lived.

Mrs. H., aged thirty-two, mother of three children, youngest about three. She had been always regular in her menses until lately when she flowed between times. Felt first-rate up to three weeks from the date I was called, when getting out of a carriage she felt a sudden tearing pain in her right side which almost made her faint. She, however, got over this in a little time, but she noticed she had a little discharge of blood at times, and occasionally profuse hæmorrhage and bearing-down pains in bowels. About a week from this date she was out walking with her husband and when going up the high stone step into her home she was seized with the horrible pains again and swooned on the floor. Her husband got alarmed and sent for a physician. When he arrived she was somewhat better and

he prescribed for colic, and all danger was averted for this time. She went on for another week, and one night her husband was wakened by his wife's moans who said she was dying and to send for a doctor quickly. My office being close at hand I was called in and found the woman very pale and weak and almost pulseless. She complained of pains, which I took for those of a miscarriage, but on examination the os was quite firm and I could discover no show, but the womb was pushed forward and a large mass in the posterior cul-de-sac which seemed to be quite firm and resembled a full-grown placenta. I gave a hypodermic of digitalin and atropine and immediately sent for Dr. Jennings. He thought the case very serious and Dr. Jenks was called in. Dr. Jenks pronounced the case one of pelvic hæmatocele probably due to extra-uterine pregnancy, but thought the patient too weak for an operation. She lived twenty-four hours after with great pain most of the time. On post-mortem we found the tissues, on cutting, bloodless, and the peritoneum black and bulging. There was a great quantity of clotted blood—not all clotted—and the prior inflamed condition of the right ovary or tube, so close to the ovary, was ruptured and the fœtus, about three months, floated over to the left side.

I report Dr. Price's case as a similiar case with operation and patient still living, and leave you to draw conclusions.

(Case reported by A. H. Cordier, M. D., in February number of *Annals of Gynecology*, 1892).

Mrs. A., mother of one child, five years old. Has been regular in her menstrual periods up to ten weeks ago when she had an inter-menstrual flow of blood lasting two days. The same irregularity was noticed the following month but accompaied by more pain than usual. She has had no subjective signs of pregnancy; more or less pain on right side was noticed for the last four weeks, but no acute suffering until one week ago, when a most severe tearing pain developed in the region of the right ovary lasting until unconsciousness was induced one-half hour later by an attack of syncope. She was placed in bed in the recumbent position and ordered to keep quiet by her doctor. This injunction she did not obey longer than two days, as she was free from pain and had recuperated from the previous prostration to such an extent that she thought it would be folly to remain in bed longer. She resumed her duties as housewife two days later which speedily brought on another attack of pain and prostration. This time she remained in bed a week barely alive part of the time. At this time Dr. Joseph Price was called in consultation to see the patient and recognizing the seriousness of the case recommended an immediate operation. She was placed in his private hospital (it being near by) and the operation was performed at once. At the time of operation she was pulseless from loss of blood, the heart beating at the rate of one hundred and sixty per minute. She was sighing frequently and having fainting attacks often; skin was cold and clammy, face blanched, and the lips had the appearance of an unpainted wax figure. Her condition was one of most desperate character from loss of blood, making the prognosis extremely grave with an operation, and certain death without it. Very little ether was given or required during the progress of the operation. In cutting through the distended and tense abdominal walls the knife cut through the exsanguinated tissues as through a piece of cold tallow, not a drop of blood escaping from the divided capillaries or arterioles, so empty

were they from the vast amount of blood lost from the circulatory system. On reaching the peritoneum the serous membrane was seen to bulge through the incision and present the peculiar and characteristic appearance seen in these cases, which of itself makes a diagnosis warranting you to carry your investigation further and seek the source of the fluid (blood). This appearance told the operator that the patient had a dark fluid in the peritoneal cavity which with the history of this patient was certainly blood, and the blood was from a ruptured tubal pregnancy. On opening the peritoneal membrane a stream of pent-up blood found an exit through the incision, spurting fully two feet high and in a stream the size of the abdominal incision, deluging the operator and his assistant. The pedicle was quickly secured by a Chinese silk ligature, the bleeding controlled and the appendage removed. The abdominal cavity was irrigated with a large quantity of hot water and many clots removed, drainage tube introduced and bandages applied, etc. As expected her recovery was slow. She is now perfectly well.

SUGGESTIONS IN THERAPEUTICS.*

By G. A. WILLIAMS, M. D., Bay City, Michigan.

Therapeutics, we understand, is the use of medicine in the treatment of disease. To be a good therapeutist, a man must be well versed in every department of medicine and capable of observing and reasoning well. The object we wish to accomplish in the use of medicine is to cure quickly, safely, and pleasantly—*curare cito, tute et jucunde.* The first thing in therapeutics is the prescription with the formula for compounding the medicines and the directions for administration. Heretofore prescription-writing has not received sufficient attention in medical schools and the matter of correct dosing has also been very much neglected. In administering medicine, the teaspoon, desertspoon, tablespoon and wineglass are generally used, but when exact dosing is required all these measures will be found very variable and unreliable. At the present time many of the druggists furnish graduated medicine-glasses to all their regular customers, and these glasses can also be ordered by the physician on the bottom of the prescription. As many of the medicines corrode metallic spoons, this is a matter to be considered as well as the exactitude of dosing. Many people suppose that a drachm of any mixture in the fluid form usually contains sixty drops, but to show the discrepancy we might mention the following preparations: Liquor potassii arsenitis, fifty-nine to sixty-three drops to the drachm; castor oil, fifty-five; diluted sulphuric acid, forty-nine to fifty-four; alcohol, one hundred and twenty to one hundred and forty-three; aromatic sulphuric acid, one hundred and sixteen to one hundred and forty-eight; chloroform, one hundred and eighty to two hundred and seventy-six. Any difficulty in this way can be obviated by the use of some of the various medicine-droppers.

It has always been customary for physicians to write prescriptions in Latin, the abbreviations not only being more convenient and comprehensible to both the physician and druggist, but a little mystery in this respect has always a

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tendency to produce a wholesome moral effect upon the patient. There are many people who would have no confidence in the physician and even refuse to take the medicine, did they understand the composition and true nature of the remedies. Nowadays, all well educated physicians are quickly disposed to take advantage of the so-called "mind-cure," and we all certainly understand and appreciate the influence of the mind over the body much better than any of those individuals who go about calling themselves mind-cure and faith-cure doctors. In writing a prescription, write as legibly as possible, for this not only obviates trouble and annoyance, but also saves time in hunting up the writer for an explanation. If there be a possible chance of an abbreviation being misunderstood, then the best way is to write out the word in full. The illegible writing of medical men is something proverbial.

We once knew a gentlemen who got a pass to a theatre from one of his theatrical friends, and on going to the play in the evening some one remarked that the pass looked very much like a doctor's prescription, and suggested trying it. They stopped at a drug store and the clerk, after giving the paper a casual glance, took down some bottles and prepared to make up the prescription. The gentleman, however, excused himself and said he was in a hurry and would return later in the evening for the medicine. It is needless to dwell upon the abominable writing of medical men, for some of them are entirely irreclaimable and past redemption. As the old saying goes, "A straw best shows how the wind blows," and when we see a prescription neatly and carefully written it is an indication that the physician is competent and well educated, but when the writing is poor and incorrect, of course the indications are to the contrary, and we are liable to suppose that the writer is illiterate and unscientific. To speak of some common errors in this way: Observe that the abbreviation of pilula is pil., not pill.; gtt. for drops, not gtts., as there is no "s," the word being gutta in the singular and guttæ in the plural. The same with grains, the abbreviation is gr., not grs., the singular being granum and the plural grana.

Always have the interest of your patient in view and do not prescribe too much or too little. Avoid all unnecessary expenses, otherwise you may be accused of collusion with the drug store. Something that I never could understand is why physicians will use uneven numbers in prescribing, such as a mixture of two and one-half ounces, three and one-half, or five, when two, four, six or eight ounces would be much more sensible and convenient for all parties concerned. At the present time the tendency is towards simplicity in prescribing, and to give as little medicine as possible is the rule with many eminent practitioners. As an example of a judicious combination we have the epilepsy mixture of Brown–Sequard, a combination of the bromides being more efficacious than any one bromide alone. Speaking of bromides and iodides, we hear physicians speaking of bromide of potash and iodide of potash, which are misnomers, the words being bromide of potassium and iodide of potassium. With respect to compounds, the shot-gun prescription is not to be desired. It may act well in some cases but you are almost sure to have decomposition, and double decomposition and ingredients that counteract each other. A good way, when you wish to give several remedies at one time, is to make two prescriptions and give one before and the other after meals. We have not studied the subject of incompatibility sufficiently and as a general rule we might say, always endeavor to

avoid unsightly, disagreeable and noxious mixtures. We all know that free acids and the acidity of all preparations are neutralized by alkalies and carbonates, such as lime-water and chalk-mixture with acidulous pepsine, and many others that could be mentioned. Put the medicine in that form in which it can be most easily taken, and when possible, especially with children, cover the disagreeable taste by syrups and elixirs. I have had occasion to notice some of these shot-gun prescriptions and noxious compounds, and they seemed to bear a very close resemblance to some of the thin mud that a person might scrape up out of a mud-puddle. Dr. Oliver Wendell Holmes in speaking on this subject says: "If all these mixtures were thrown into the sea it would be all the better for mankind and all the worse for the fishes." This is where the homœopathist has grown into favor; not by his "*similia similibus*," but by simply making medicine palatable and agreeable, and if he has done nothing more he deserves much credit for this needed reform from those whose stomachs are no longer over-irrigated by the apothecary, and whose veins are no longer under-drained by the phlebotomist.

If there be an idiosyncrasy with respect to any special medicine—such as mercury, opium, turpentine, etc.—avoid administering it. Remember that if a disease be incurable it may still admit of great alleviation, hence it is wrong to give up a case, although at the same time the patient is not to be deceived by false promises. Never order or sanction the use of a medicine whose composition is not known. Bearing in mind the weakness of human nature, and prejudices, and superstitions which are current, it is not only necessary to give good advice but pains must be taken to impress the patient and attendants, so that the necessary treatment may be thoroughly carried out. Every precaution must be taken to prevent the spread of infectious disorders and in all such cases the evacuations should be passed in a vessel containing some disinfectant fluid. Hope and confidence are always important remedial agents, and in many cases the individual who has faith will recover more speedily, *caeteris paribus*, than he who is lacking in belief. In watching the restoration of a sick man to health do not attribute the improvement too confidently to the action of the medicine prescribed, for it may not have been taken, or it may not have been absorbed, or its properties may have been destroyed by adulteration, or it may have even proved injurious—recovery taking place in spite of it. In many cases there is an advantage in making up your own medicines, and this is a custom which is becoming every day more popular with physicians. When a mixture requires to be taken continuously, if a prescription be written, the doctor may get one dollar and the druggist gets twenty-five or thirty or more. In such cases you can control your patients better by making your own medicine. Take two, three, four or five dollars as you go along, always remembering that half a loaf is much better than none. Never take contracts in the treatment of patients, for the disease may be so intractable that you will not be sufficiently paid, and there will be a time when your patient will be looked upon as an unwelcome visitor. In prescribing anodynes and hypnotics always prescribe in such a way that should the whole quantity be taken in one dose the result would not prove fatal to your patient. Many deaths have been caused by leaving large quantities of chloral, morphia, etc., in the hands of sick people. Always keep medicines in your pocket-case for all cases of emergency such as hæmorrhage, croup, intense

pain, etc., for the patient may die before the medicine can be procured from the drug store. Do not play the farce of "*le medicin sans medicine.*"

In conclusion let us endeavor to reform and devote more attention to this subject. Write prescriptions plainly and scientifically, so that they may be a credit to the members of our profession. Beware of unnecessary prescribing, for this is what has given rise to many of the "nostrums" and so much counter-prescribing by druggists, and in many cases the physician who is imprudent in this way, will bear a very strong resemblance to a man assisting at the obsequies of his own funeral.

PRACTICAL PATHOLOGY FOR BUSY PRACTITIONERS.

By HENEAGE GIBBES, M. D., C. M., L. R. C. P. (London), F. R. M. S.,
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FINAL PAPER.

The thinnest sections having been selected and placed in clean alcohol, care being taken that all small particles of imbedding material are removed, they are ready for staining. The best stain for all practical purposes is an aqueous solution of logwood, made from chips of the wood and not from the extract. The formula for this stain will be found in my work on "Practical Pathology and Morbid Histology," already mentioned. It can also be obtained ready for use from Eberbach & Son, Ann Arbor.

TO USE THE STAIN.

Take a large watch-glass, having a facet in the bottom so that it will stand steadily, and filter into it fifteen drops of the stain; dilute this with distilled water till the watch-glass is about two-thirds full, stir with a needle until the solution is clear and then place the sections, one by one, in the stain with a needle or sputum spreader. The sections will spread out on the surface of the stain and they should be allowed to remain there for a minute or so until the spirit has become diluted, when they should be gently immersed in the stain, as if they are allowed to remain on the surface they will not take the stain evenly.

The length of time required to stain sections properly varies with the hardening process and the nature of the section itself. Sections from spirit-hardened material, as a rule, stain more rapidly than those hardened by other processes, but the length of time required will vary even in those hardened in spirit. For instance, sections containing a large amount of fibrous tissue will take longer to stain than those made up almost entirely of glandular structures. It is impossible to lay down any rule as to the length of time sections should stay in the stain and the process must be watched and judged by frequently examining them. To do this take out a section and place it in a watch-glass of ordinary tap water, which if it comes from a cistern should be filtered. In all staining operations the watch-glass should be placed on a piece of white blotting-paper so that the depth of stain in the section can be readily seen.

I have stated that the stain must be diluted with distilled water and that tap water must be used for examining the sections and washing them when sufficiently colored. It is necessary to be careful about this as the lime salts in the

tap water act as a mordant on the stain and also cause some chemical change in the tissue by which the fully stained section which comes out of the logwood a dull red color, is slowly changed to a brilliant lilac, and in this process the different elements of the tissue become differentiated by their varied reactions to the stain.

After having examined the sections and having found that the staining process has proceeded far enough, which can only be determined by practical experience, remove them all to a watch-glass of tap water and move them about in it for a few moments, then transfer them to another watch-glass of clean tap water and leave them in it for ten minutes to allow the water to effect the change, which will be seen by their gradual alteration to a lilac color.

After the sections have remained for ten minutes in the tap water they must be removed to a watch-glass of alcohol to dehydrate them. As soon as they are placed in the alcohol they become hardened by its action and it is necessary that they should be spread out evenly at first, as if they are put in rolled up they will remain so and cannot be straightened out again in the mounting. To do this a section should be taken up by the needle, not by one corner, but with the whole of one edge laying over the needle. It can then be slowly drawn through the watch-glass of spirit and the needle at the same time turned round so as to throw it off. It will then lie perfectly flat in the spirit and remain so in the further operations. If a section is found to be curled up in the spirit it should be transferred to a watch-glass of water where it will at once spread out flat. If it is then taken up in the manner just described and placed in the spirit, it can be kept straight, but sometimes the process has to be repeated more than once. If a section is curled up in the spirit it will never lie flat on the slide and consequently will not make a good mount. An ordinary section will take ten minutes in the spirit to become dehydrated. By spirit is meant ordinary commercial alcohol. A section of such a tissue as lung, being so much looser in texture, will not require quite so long.

The next process is the placing of the sections in oil of cloves to clarify them. To do this take them up with the needle one by one and drain off the excess of spirit by touching them on a piece of clean blotting-paper, or better on the back of the hand, and place them in the watch-glass of oil of cloves. This will permeate them in a very short time. They are then ready to mount on the glass slides.

Caution.—The oil of cloves must be put in a perfectly clean watch-glass, as for obvious reasons it is not desirable to have magnified portions of dirt (matter in the wrong place) in the field of the microscope; but more important even than this is the necessity of having everything perfectly free from the least suspicion of water, as should there be the slightest trace of this in the oil of cloves, the sections will at once take it up. When the mounting fluid, composed of a gum, comes in contact with this small speck of water it will be decomposed and a black patch will be formed in the section.

TO MOUNT THE SECTIONS.

To do this a section lifter is required by which each section is taken up and transferred to the glass slide. The simplest form consists of a piece of thick copper wire with one end beaten out flat and rounded off, it is made perfectly

smooth and then turned up at an open angle. A glass slide is placed on the mounting card, a small card-board arrangement which shows the centre of the slide where the section is to be placed. A small drop of the Canada balsam mounting solution is placed on the slide exactly in the centre and spread out with a needle to about the size of the section to be mounted. The section lifter is then placed in the oil of cloves and a section placed on it with a needle and held there while the excess of oil of cloves is drained off against the side of the watch-glass. More can then be drained off on a piece of blotting-paper, always remembering that the more delicate the section is the more oil of cloves must be left on the lifter. The lifter is then placed on the slide and in contact with it, in such a position that the section on the lifter is where it will be when mounted. It must be understood that the section is so placed on the lifter that it is only just clear of its edge. Now by pulling the edge of the section down onto the slide the least bit, it can be held there by the needle while the section lifter is gently withdrawn, being kept in contact with the slide while so doing that bubbles of air may not be formed under the section. The section is now in its position on the slide and it only remains to put on the cover glass. To do this take one up with the cover glass forceps and transfer it to the finger and thumb of the left hand, then place a small drop of mounting fluid on it close to one edge, turn it over with the fingers and take it again in the forceps opposite to that part of the edge having the Canada balsam on it, place a needle on the slide and rest the edge of the cover glass against it on the slide, in such a position that when lowered down it will be in the right place over the section, then gently lower the cover glass with the forceps in such a manner that a wave of the mounting fluid slowly flows through the section carrying all bubbles of air before it. Gently press the cover glass down with the point of a clean needle and be careful not to use much force. If there are any bubbles present leave them alone and if they are not imprisoned in a cavity of the section they will come out as the mounting fluid dries. If they are in the section in a position where they cannot get out it is no use to try and force them out by pressure; simply take off the cover glass, tranfer the section to oil of cloves, and mount it again. Slides made in this way require no further work. Should the balsam mounting fluid evaporate from beneath the cover glass a little more can be run in by placing a small drop on the slide at the edge of the cover glass.

Glass slides and cover glasses must be perfectly clean before being used. Glass slides can generally be cleaned with a piece of chamois leather, but the cover glasses require a special process, for which see my book already referred to. A label should be placed on the slide as soon as the section is mounted, and all particulars should be written on it so that there will be no possible difficulty of identification.

MATERIALS AND APPARATUS REQUIRED FOR STAINING AND MOUNTING SECTIONS:

Glass slides, 3x1 inches;	Mounting fluid;	Two needles in handles;
Cover glasses, $\frac{3}{4}$ inch circle;	Oil of cloves;	Copper section lifter;
Mounting card;	Alcohol;	Cover glass forceps;
Logwood staining fluid;		Watch-glasses.

These can be obtained from the before mentioned firm.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MARCH 7, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

DR. ARTHUR BENNETT read a paper entitled "Ectopic Pregnancy, with Report of Case." (See page 201.)

DR. E. W. JENKS: I saw the patient, whose case forms the nucleus of DR. BENNETT'S paper, in consultation with himself and DR. C. G. JENNINGS. I wish to correct an error in the length of time DR. BENNETT says the patient lived after I first saw her. I saw her in the morning; she was then dying and in eight hours thereafter she was dead. This case shows very plainly the great importance of early diagnosis of these cases as bearing upon our ability to apply successful treatment. In the treatment of these cases I would exclude galvanism entirely. In this particular case an operation was simply out of the question as the patient was in the very act of dying when I first saw her and far too low to stand any operative interference, especially as the whole abdominal cavity could be felt to be entirely filled with clotted blood with very little liquid blood whatever. She had been slowly bleeding to death probably from her very first fall. There is only one mode of treatment that is likely to be followed by any good result, and that is by operation, but the operation must be done before the patient is in a moribund state. At the post-mortem examination we found this to be an undoubted case of ovarian pregnancy. There is a great difference of opinion in the profession as to the possibility of ovariau pregnancy taking place. JOHNSTON, of Cincinnati, says it is an impossibility, but MANN, of Buffalo, has exhibited a pathological specimen demonstrating the fact that it can take place.

DR. H. W. LONGYEAR: Some hold to the theory that in the great majority of cases pelvic hæmatocele is present. In a case of ectopic pregnancy which recently came under my observation in which an operation had been recommended, the patient made a very good recovery under treatment without an operation.

DR. J. H. CARSTENS: Pelvic hæmatocele is always due to some other pathological state, and that state must be diagnosed and treated surgically. These patients will often make wonderful recoveries after they are apparently almost dead. In view of the very great recuperative power of woman as shown in their prompt recovery after the enormous blood losses after placenta prævia and post-partum hæmorrhage, they should be given every benefit of an operation even when the chances seem desperate. In some cases which recover from the effects of the actual hæmorrhage we operate for a resulting tumor and demonstrate the existence of extra-uterine pregnancy. The following case recently came under my observation: A woman gave a history of irregular menstruation. She had a sudden discharge of blood and mucus from the bowels. Extra-

uterine pregnancy was suspected but its possibility denied by the patient. A laparotomy was made and our diagnosis confirmed.

DR. W. P. MANTON: The only way to cope successfully with these cases is by laparotomy, ligating the bleeding vessels and removing the products of gestation. This case is one which well merits reporting.

DR. E. W. JENKS: I have some regard for the opinion of men who have labored long and earnestly in this field and there are many such who believe that hæmatocele is not always due to extra-uterine pregnancy. In any event I would not operate on a case which was in the condition this woman was in when I saw her.

DR. ARTHUR BENNETT: At the time we had our consultation we wanted to operate if there had been any chance of a successful termination, but there was not. In a series of post-mortem examinations made in Philadelphia, out of three thousand five hundred deaths one per cent. were due to extra-uterine pregnancy. The only hope of success is an operation.

REPORTS OF CASES.

DR. W. P. MANTON: A case came to me to-day with the following history: In November last the woman had a watery discharge from the vagina, followed by a leucorrhœal discharge and slight menstrual flow. She had morning sickness. In December: Slight menstrual flow. She was large round the waist; morning sickness continued. January: Slight menstrual flow; felt better. January 25: At each menstrual flow she passed shreds of tissue like skin. She says that she felt life to-day. Upon examination the uterus was found perfectly normal. Diagnosis: Pseudo-pregnancy due to approaching change of life.

Interesting cases of pseudo-pregnancy were reported by DRS. FLINTERMANN and JENKS.

DR. H. W. LONGYEAR reported a case of unsuspected pregnancy in a woman of forty-five, she supposing it was the change of life.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, MARCH 21, 1892.

THE PRESIDENT (*pro tempore*), FLORENCE HUSON, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. T. A. MCGRAW exhibited a patient eight or nine years old who had suffered a fracture of the tibia and fibula eighteen months ago. The fracture never united, a false joint formed and extensive necrosis of the fragments took place. Two long fragments were left which were overriding each other, and it was found impossible to obtain union by ordinary means. A year ago he was anæsthetized, a free incision was made at the seat of trouble and all dead bone and fibrous tissue thoroughly removed. A rabbit's tibia and fibula were then removed from a healthy living animal and reduced to small fragments, all possible antiseptic precaution being taken. The fragments were then placed carefully in the breach between the two fragments. It grew, producing as you see a perfectly sound and useful leg. There are several theories as to just how union takes place here, the chief of which are: (1) These fragments may act in a similar

way to the small pieces of cuticle in skin grafting, each becoming a nucleus of a new growth of bone; (2) they may act upon the surrounding bone cells as stimuli; (3) they may act as a scaffolding through which the new blood-vessels grow and finally produce a sound bone. A brother of this patient is a sufferer from a diseased knee-joint. Showing the influence of a faulty diathesis in these cases of ununited fractures. A patient now in Saint Mary's hospital has an ununited oblique fracture of the tibia brought about by a muscle getting in between the ends of the bone. In this case there is no necrosis or loss of tissue. All the muscular tissue was removed from between the fragments and a number of small pieces of bone chipped off from either fragment and allowed to remain in the breach.

DISCUSSION OF PAPERS.

DR. J. B. NEWMAN read "A Short Paper on Influenza: Its Different Forms and the Best Treatment." (See future issue of The Physician and Surgeon.)

DR. CHARLES DOUGLAS: I am very much interested in DR. NEWMAN'S remarks and the facts which he has deduced. His comparisons are very apt and appropriate. In treating a disease of one particular part of the body we are very apt to overlook pathological and physiological changes taking place in other parts, and the influence they may have upon the disease we have under our observation. The point which the doctor makes in the matter of strict attention to the collateral and cutaneous circulation in the treatment of inflammatory diseases of the internal organs is a good one, and is especially applicable in inflammatory lung affections. In supporting a heart which is overloaded by a stagnant pulmonary circulation, we should attend carefully to the cutaneous circulation. It is often very difficult to determine just how to make our hot application to the skin; the question usually at stake is: Do we wish to reduce the temperature or stimulate the circulation? The color of the patient's skin or nails is the best index. Hot applications are not always in reality hot in comparison with the temperature of the skin, and it is also frequently a great difficulty to get patients and their attendants to carry out our directions in the matter of poultices. When a stimulating effect is desired the poultices should be used hot and frequently changed, whereas to reduce the temperature the poultices should be used large, not very hot and not frequently changed; for instance, if we have a very high temperature with a high bounding pulse and red skin, very large poultices not very frequently changed are the best. This question of poultices often comes up in the treatment of influenza. Vitality, age, and general condition, all have an influence upon our plan of treatment.

DR. E. T. TAPPEY: The doctor has given us a very exhaustive paper on the subject of influenza. The nervous complications have not been so frequent this year as formerly. Rheumatism has been a frequent complication this year, attacking different parts of the body, namely, the intercostal muscles, hips, shoulders, and calves of the legs, and lasting for several weeks. Treatment: Acetanilid, particularly in the early stages, and in combination with camphor, belladonna and quinine, is particularly useful. Large doses of the bicarbonate of potassium have been recommended by some British practitioners but have not turned out well in my hands. Among my unusual cases are the following: (1) An old lady was taken ill about two months ago and went through the usual course of the disease. She was attacked four weeks later by severe muscular

rheumatism, which was modified by salicylic acid, although her age did not admit of her taking very large doses. Salicine was also given and improvement followed. Suddenly she was thrown into a severe collapse. She was slightly comatose, could not speak and was covered by a cold prespiration. One-fiftieth grain of nitro-glycerine was given upon the tongue together with one-eighth grain of morphia hypodermically, and she revived slightly but remained in a semi-comatose condition with almost complete loss of speech. Large quantities of albumen were found in the urine and she died at the end of two weeks. (2) A woman eight months pregnant was seized with a catarrhal influenza with the usual symptoms, in the course of which she was taken with a severe chill, profuse prespiration and a temperature of 105°. Four hours later labor came on and the child was born in two hours. Her temperature has been gradually coming down since her confinement.

DR. BECELAERE read the following translation of an article published in Lucas Championniere's *Journal de Medicine et de Chirurgie Pratiques:*

"Several Berlin pathologists have simultaneously discovered a microbe of influenza.

"PFEIFFER has found in the sputum of patients affected with influenza bacilli which could not be detected in any other sickness, and of which he succeeded in obtaining a culture. Somewhat similar in appearance to those of septicæmia of the mouse. These micro-organisms completely disappear when a cure is effected. According to PFEIFFER contagion obtains through sputa, which ought certainly to be destroyed or disinfected.

"KITASATO discovered the identical bacillus in the sputum of influenza patients, and even devised a means of securing several consecutive cultures of the micro-organism. He found it a difficult task to select the specific bacillus among the innumerable others co-existing in the bronchial secretions. No more than PFEIFFER, he never found said microbe to be present outside of cases of influenza, to which it seems entirely confined.

"CANON also describes a similar bacillus which he discovered in the blood, and which was, by KOCH, pronounced identical with the species described by the two first named pathologists. The occurrence of these micro-organisms in the blood vouchsafed the diagnosis of influenza in otherwise doubtful cases, especially when the usual bronchial catarrh was deficient."

DR. BECELAERE thought that the pathogenic germs of influenza, entering the organism by undetermined ways, gain access to the blood, where they thrive and proliferate; and that the catarrhal determination to the various mucous membranes are plain indications of an effort made by the system to get rid of, and expel, the germ of influenza by various emunctories.

DR. J. L. IRWIN: Hyperæsthesia of the skin has been noticed in my practice. My rheumatic cases have been characterized by the affection seeming confined to one locality instead of wandering from place to place. Typhoid symptoms are sometimes noticed, and the diagnosis between typhoid fever and influenza often presents points of difficulty.

DR. H. W. LONGYEAR: In my practice salol has been very useful combined with phenacetin, where there is a good deal of pain. I give salol as a general systemic disinfectant. A considerable amount of intestinal disturbance is found this year.

DR. J. B. NEWMAN: In the cases of difficulty in determining about temperature of our cutaneous affections mentioned by DR. DOUGLAS, I generally make the temperature my guide. If the temperature is very high it may be quickly reduced by the rapid radiation of the sponge bath. In most of the cases of influenza-pneumonia in adults the temperature is not very high—102° generally—in which case, if the heart be weak, hot applications may be made to the surface. If the patient is pale and the heart weak nitro-glycerine is indicated, and if the head be very hot applications to the skin together with strychnine are indicated. I never use the salicylates because they are too nauseating and depressing; I like salol better. The diagnosis of our cases often is difficult, typhoid fever being sometimes mistaken for it. The patient will sometimes go through several attacks of pneumonia.

DON. M. CAMPBELL, M. D., Secretary.

CORRESPONDENCE.

THE CHEMICAL EXPLOSION AT THE UNIVERSITY OF MICHIGAN.

EDITOR The Physician and Surgeon: MY DEAR SIR—As many persons, both in the profession and without, have asked me for a detailed statement of the extent of the injury sustained by Professor Campbell, at the time of the recent explosion in his laboratory in the university of Michigan, I have chosen your columns as the best medium through which to answer my professional brethren who may chance to be acquaintances and friends of the injured scientist.

It is unnecessary to speak in detail of the explosion, except to narrate simply that Professor Campbell was engaged in original research work and had placed some spongy palladium in a V tube, which was immersed in water contained in a glass beaker. Through this tube he was about to pass some gas from one large bottle to another. When the gas came in contact with the palladium it was ignited and an explosion occurred, bursting the tube and beaker with a loud report, shivering the glass, several pieces of which entered the Professor's eyes. The face was but slightly injured.

I arrived about twenty minutes after the accident occurred. It was with great difficulty that I opened the right eyelids as they had become so rapidly swollen. When I did succeed I found six pieces of glass measuring one-third by one-eighth of an inch, driven *en masse* into the cornea. These bits were wedged in beside each other, and had so completely lacerated the eye that it was impossible to recognize any normal corneal tissue. I removed the pieces, when there was immediate and total extrusion of the iris, lens, and vitreous. The globe collapsed and I decided upon immediate enucleation as the quickest way to recovery. The left eye was now inspected in the hope that it had not been seriously damaged. There was no swelling of the lids, no ecchymosis, and indeed no other symptom to indicate a severe wound. Upon looking closely, however, a piece of glass was seen measuring nearly an inch in its longest diameter, and somewhat irregularly triangular in shape. This I removed most gently with my fingers. It had penetrated sufficiently far to tear through cornea, iris, and lens, and its farther end was against the retina. Its removal

was of course followed by loss of all the inner structure of the eye. Nothing therefore remained but to remove the globes, leaving as much, however, as would serve to render the resulting deformity as slight as possible.

The patient was removed from his laboratory to the university hospital where enucleation was performed upon the right eye, and evisceration upon the left. The cornea and sclera were accordingly left. There was at no time after the operation a temperature over 99.8° and a rapid recovery was made.

The university loses from its active teaching corps a conscientious worker and a brilliant man. The entire university circle has been enveloped in a gloom which will be but partially removed when Professor Campbell resumes that part of his work which can be done by the aid of assistants; and the thought that there yet remains to him, though blind, a useful sphere which his energy and scholarly attainments will enable him to fill.

Yours very respectfully, FLEMMING CARROW, M. D.

ANN ARBOR, MICHIGAN, April 25, 1892.

EDITORIAL ARTICLES.

RECENT PROBLEMS IN HEREDITY.

IN his recently delivered Cartwright lectures, which everyone would do well to read, Dr. Osborne very forcibly indicates the differences which at present prevail in biological circles regarding the problem of heredity. Are acquired characteristics transmissible, or are they not? How is the transformation of species to be explained, by the doctrine of Lamark, or by that of Weismann? The answers to these questions one way or the other are so far-reaching, and our vital and ethical conceptions so dependent upon them, that Herbert Spencer asserts: "The question, Which of them is true? demands, beyond all other questions, whatever, the attention of scientific men." The urgency of the matter will no doubt so stimulate biological inquiry, that increased knowledge must certainly follow the activity now being displayed in this field of research.

Weismann's theory, as is now pretty generally known, differs from the Lamarkian doctrine, in finding a fundamental key to the problem of heredity, not in the transmission of acquired characteristics, but in the "continuity" of the germ-plasm. The germ-plasm of which Weismann postulates the existence, is a distinct form of protoplasm set apart as the vehicle of inheritance, and therefore distinct in its differentiation from the somatoplasm or body protoplasm. If we were to follow the fertilized ovum we should, according to Weismann, first find it dividing into somatoplasm and germ-plasm. The former would supply all the tissues of the body with their quota of hereditary structure, but the germ-plasm would not be employed in the process of cell-division until it entered into the formation of the nuclei of the reproductive cells. It would there be isolated from all possibility of those functional modifications to which the somatoplasm would be liable. In other words it would pass to the next individual unaltered, and its "continuity" would constitute it an immortal tissue. The only essential changes to which the germ-plasm would be subject being those imparted by the union of the different plasmata.

In the lectures alluded to, Dr. Osborne has accumulated certain evidence of variations, which would seem well-nigh inexplicable on the theory of natural selection alone. In his brief review of human evolution he enumerates upward of twenty developing organs, and upward of thirty degenerating organs. The consideration of these organs separately, the observation of their independent histories, the manifest alteration which has occurred in these structures by use and disuse, constitute a body of evidence for which the Weismann doctrines, as yet, furnish no satisfactory rebuttal. The true explanation of the problem of heredity will probably lie in the discovery of a constant relation between the germ-plasm and somatoplasm. The etiology of many nervous diseases already infers a relation between the somatoplasm and the germ-plasm. An increasing amount of clinical evidence is establishing the fact that sundry degenerations and abnormalities, such as exophthalmia, muscular atrophy, epilepsy, etc., can appear as the result of injury to the spinal cord of the ancestor, so that if these characteristics be not considered to have been transmitted as Brown-Sequard thought, they must at least be regarded as the effect of an influence imparted by the nervous system to the germ-plasm.

The medical profession will watch with interest the progress of the struggle now being waged by the biologists. A number of venerable names appear on both sides. In Weismann's own country the naturalists are for the most part opposed to his views. Virchow, Eimer, and Hæckel, have placed themselves on record in favor of Lamarkian doctrine. In England he has found ardent supporters in such well-known naturalists as Wallace, Lancaster and Dyer, while he is opposed by Mivart and Turner. Huxley and Romanes are still doubtful on which side to array their strength, and probably a like hesitancy accounts for the silence of American naturalists.

EDITORIAL BREVITIES.

THE NEW YORK PASTEUR INSTITUTE.

THE New York Pasteur institute issues a report showing synoptically the work of the institute since its opening. The results have been similar to those reported in other institutions. The proportion of those who died, after inoculation, has only been about one-fifth of one per cent. In all two hundred and ninety-eight cases have been treated. The statistical showing is eminently in favor of this mode of treatment, and it is to be regretted that the institute should have any complaint of a lack of professional support.

THE SOCIAL IDEALS OF THE MEDICAL PROFESSION.

IN a recent paper by Dr. Maurice Burnstein in the *Doctor's Weekly* are certain suggestions in the direction of organizing the medical profession into an "order." Each state to have a medical board with subordinate boards in each county. Each county board to have a certain number of physicians under its charge. Each physician to have a certain number of patients. The physicians are to be paid by the central board, just as teachers are paid by boards of education. The effect of any such "ideality" as this, would be difficult to predict. It is urged on its behalf that "the physician would not have to hope for better times, he

would not try to gain the patient's sympathy, mainly for the purpose of taking him away from his brother physician, but getting his regular salary, he would be glad to be occupied in his professional work." In these so-called advantages are suggested the evils of this system. The physician getting his regular salary to attend his patients would be deprived of most of the incentives to professional excellence which spring from individualism. Socialism as a panacea for the physical ills of the world, is not likely to be more successful, than as a remedy for the moral and political evils of our time, and under any such social scheme as this the sick man would soon be glad to revert to some method whereby he felt that some relation existed between his physician's efforts to heal his disease and the actual compensation he received for these efforts. The objection to this scheme is the insuperable one,—its "ideality."

THE TEMPERATURE OF THE BRAIN.

PROFESSOR ANGELO MORSE, of Turin, in the Crooman lecture lately delivered before the royal society of Great Britain, brought forward the result of his investigations in regard to cerebral temperatures. He found the brain-temperature to fall below the arterial temperature in profound sleep. A noise, or any sensory stimulus not sufficient to awaken the animal will cause a slight rise in temperature. Epileptic seizures cause a rise. When the animal is awake the temperature of the brain is higher than when asleep. The general conclusion is that psychical activity being a condition corresponding to chemical activity, consciousness is a condition involving higher temperatures than unconsciousness. Among the drugs tested, opium was found to cause a fall and cocaine a rise in cerebral temperature.

THE AMERICAN MEDICAL ASSOCIATION.

THE next meeting of the American medical association will take place in Detroit, June 7, 8, 9, and 10. The progress of arrangements for the reception of the visitors is all that could be desired. Every facility is to be given for section-work, the most important part of the association's work. For diversion, many things are being thought of, and receptions and boat-rides, and hospitalities of various kinds, will sweeten the hours of toil. The attendance promises to be very large, probably three thousand members or half the strength of the entire association, will be present. The hotel accommodations will be ample, and should every member of the association be present he will be well cared for. Reduced rates will be given by the railroads. Every Michigan physician should take this opportunity of joining the association.

MEDICAL NEWS.

ALUMINUM has been discovered in urine.

A NEW marine hospital will be erected at Vineyard Haven.

A LAW has been passed in Italy making vaccination obligatory.

GUY DE MAUPASSANT is now numbered among the illustrious lunatics.

THE Flint club, of Baltimore, is a medical club where all medical talk is tabooed, and diversion of a Bohemian order indulged in by the members.

Two thousand patients died of typhoid in Chicago last year.

PIPERAZINE is commented upon favorably as a uric acid solvent.

PROFESSOR CREDE, the well-known obstetrician of Leipzic, is dead.

THE Indiana state medical society will meet at Indianapolis, May 12.

THE Illinois state medical society will hold its annual session at Vandalia, May 17.

FIVE MILLION aphrodisiac pills were ordered of a Chicago manufacturing chemist.

PARACREOSOTIC acid is a new antipyretic said to be of great value in acute rheumatism.

TEN thousand pounds of mercurial ointment are annually dispensed at Hot Springs, Arkansas.

FOR INCONTINENCE OF URINE.—In some parts of England a roast mouse is the domestic remedy.

MR. JONATHAN HUTCHINSON, F. R. S., was recently elected president of the medical society of London.

SIR MORELL MACKENZIE will have a memorial in the form of an addition to the Golden Square hospital.

ONE fare and one-third is the rate allowed by the railroads to delegates to the American medical association.

THE statue of Dr. J. Marion Sims has arrived in New York and will soon be completed and placed in position.

IT seems to be admitted that two infectious diseases can co-exist in the same individual at the same time.

SALOPHENE, a derivative compound containing about fifty per cent. of salicylic acid is a new anti-rheumatic.

FAT FEE.—Sir Morell Mackenzie received sixty thousand dollars for his services to the late Emperor Frederick.

THE three hundred young lady pupils of the Maryland state normal school have abandoned the corset and garter.

DR. HARVEY P. SMITH, known somewhat in Detroit and elsewhere, recently committed suicide by taking morphine.

DR. J. W. MAHONEY, of Middleton, Indiana, was recently accidently shot by his wife who was examining a revolver.

THE Iowa state medical society meets May 18, 19, and 20, at Des Moines. A large list of papers appears on the programme.

DR. HENRY F. LYSTER, of Detroit, has returned from New Mexico much improved in health and will resume his professional duties.

COLUMBUS, OHIO, is to have a new medical college. It will be the medical department of the Ohio medical university, and will be opened in September.

THE American academy of medicine will hold its seventeenth annual meeting in Detroit on Saturday, June 4, and Monday, June 6.

KOCH has wisely determined that he will not sell or describe his new tuberculin until he shall have tested its merits beyond doubt.

ELECTROCUTION will probably be abolished in New York. A bill for that purpose will be reported favorably by the legislative committee.

DR. A. B. RICHARDSON, associate editor of the Cincinnati *Lancet-Clinic*, has been appointed superintendent of the insane asylum at Columbus, Ohio.

Two hundred and fifty foreign physicians are engaged in practice in Paris. This is one-tenth the total number of medical practitioners in that city.

THE college of physicians and surgeons, of Chicago, sends us their decennial catalogue. The college appears in the front rank of educational institutions.

DR. C. J. LUNDY, of Detroit, who has been absent on account of ill health, recently returned much improved, and ready to resume his professional duties.

THE botanic doctors of Washington have issued a protest against the passage of the bill "to regulate the practice of medicine in the District of Columbia."

PNEUMONIA DISSEMINATED BY PARROTS.—Several deaths have occurred in Paris from infectious pneumonia, communicated by parrots brought over from Brazil.

THE university of Havana, which now grants the degree of M. D., is likely to be deprived of this privilege by the recommendation of the Spanish minister of foreign affairs.

DR. AMEDEE AMETTE, recently died in Paris, aged ninety years. He was honorary secretary of the Paris academy of medicine, and author of a medical code of great popularity.

THE Saginaw hospital, heretofore conducted by the ladies of the city, has been transferred to the Episcopal church, and will henceforth be known as the Good Samaritan hospital.

THE circle of Willis is a new society recently organized in New York city. It has for its purpose the diffusion of social ideas among the profession, to the exclusion of all "shop" talk.

NEW ANATOMICAL LANDMARKS.—A Pennsylvania man has been shot in the "oil regions," and a Nebraska woman has received a wound in the "early morning." So says a western contemporary.

DIPHTHERIA is due to the toxalbumin produced by the growth of the bacillus, is the conclusion reached by Dr. Welch, of Baltimore, in a series of experiments undertaken for the determination of this question.

THE Lake Shore railway company is cited to appear in a suit for ten thousand dollars damages, because of the alleged incompetency of one of its surgeons. A brakeman smashed his hand while coupling cars and subsequently died from blood-poisoning. An effort will be made to hold the company responsible, through the attending physician, for the life of the employe.

MORPHINE tinted for the protection of the purchaser is one of the latest productions of a German chemist. A beautiful pink tint is imparted to these salts by treating them with aniline dye.

THE position of school physician was created in Leipsic at the beginning of 1892. To every three or four thousand school children there will be a physician, who will receive a yearly salary of five hundred marks.

THE inebriates and dipsomaniacs in the District of Columbia are likely to have a hospital and home established for them by the government. A bill asking the necessary appropriation has been reported to the senate.

A CHIP OFF THE OLD BLOCK.—The name of Donald Maclean appears in the Edinburgh university class lists as having obtained first-class honors in practical anatomy. This young man is a son of Dr. Donald Maclean, of Detroit.

DR. BERNAYS, of Saint Louis, is said recently to have removed both ovaries and closed the abdomen in six minutes. As a further example of surgical dexterity he performed Chopart's amputation on the cadaver blindfolded.

THE annual meeting of the state board of health was held at Lansing, April 12. It was resolved to appoint a committee to visit Detroit and confer with the health officer relative to the prevention of infectious and contagious diseases.

DR. HUGH ROBERTSON, of Toronto, Ontario, professor of anatomy in Trinity medical college, recently died of diphtheria, contracted while treating his daughter. He had been connected with the Trinity school for twenty years.

THE United States census, the New York state census, and the board of health census, all differ as to the population of New York city. There is a difference of two hundred thousand between them. Evidently somebody cannot count.

THE county commissioners of Spokane, Washington, recently bought one thousand five hundred ounces of strychnine. It is believed that the drug is used in destroying wolves, foxes, rabbits and squirrels and other pests of the farmer.

COMPETITION in the English medical profession is becoming very keen. In a recent article in one of the quarterlies, it is estimated that the average income is one thousand dollars per annum and it takes a man twelve years to reach that amount.

PHYSICIAN AND HEALTH OFFICER.—The Chicago medical society is petitioned to institute an inquiry into the relations existing between the present health officer and the profession. These relations have hitherto been deemed unsatisfactory.

LORENTZ, of Leipsic, Germany, has begun the publication of a monthly called the *Medizinische Novitaten*, which is to contain notes of treatment, a bibliographical list, and the titles of the most important articles as they appear in medical literature.

DETROIT COLLEGE OF MEDICINE.—Several important and extensive alterations are in progress which will render the college thoroughly capable of accommodating the departments of dentistry and veterinary medicine. The college appears to be in a regularly healthy condition financially and otherwise.

A LARGE DOSE OF SULPHONAL.—Probably the largest dose of sulphonal yet taken is reported by Dr. Neisser in the *New England Medical Monthly*. A boy took about three ounces, slept seven days, and regained complete consciousness in nine days.

RENAUDOT, who was physician to Louis XIII, is to be remembered by a monument, because, among other things, he was the founder of the out-patient dispensary system. Many will consider this good reason for execration rather than veneration.

THERE are eight thousand saloons in New York city. Allowing twenty-five feet for the average width of each gives a total frontage of thirty-eight miles. The receipts from the sale of alcoholic drink at these places amount to seventy million dollars a year.

OUR contemporary, the *New Albany Medical Herald*, informs its readers that the American medical association will meet in Detroit, a beautiful city of one hundred and fifty thousand inhabitants situated on Lake Erie. Our friend is a little off on its geography and census statistics.

THE society for the promotion of physical culture and correct dress wants nineteen hundred square feet of floor space in the woman's building at the world's fair in which to make an exhibit. The display will consist of statuary, photographs, pictures, and cases containing costumes.

AN APOSTLE OF APOSTOLI.—Keith, of London, has written the following concerning gynecological treatment: "What I now plead for is that for a time all bloody operations for the treatment of utêrine fibroids should cease, and that Apostoli's treatment, as prescribed by him, should have a fair trial."

THE Michigan surgical and pathological society recently held a meeting in Detroit at which the following officers were elected: President, L. E. Maire, M. D.; vice-president, Wm. J. Hamlen, M. D.; secretary, F. S. Hough, M. D.; treasurer, James Newell, M. D.; curators, C. B. Storrs, M. D., and J. F. McPherson, M. D.

A DUBLIN dentist who advertised was found guilty of "disgraceful conduct in a professional respect" by the general medical council, and his name stricken from the dental register. Appeal for reinstatement was made to the court, but was refused by the judge, who held it to be professional misconduct for a doctor or dentist to advertise.

ETHER-DRINKING has become such a prevalent vice in Russia that the government is prohibiting its free sale. The drunkard in "David Grieve" longs for ether. "They say ether does the business cheaper. A teaspoonful and you can be alternately in paradise and the gutter four times a day. But the fools here don't know how to mix it."

A MAGNIFICENT microscope, costing eight thousand seven hundred and fifty dollars, has been manufactured at Munich for the Chicago exposition. It possesses a magnifying power of fourteen thousand diameters, and can be increased to sixteen thousand with the oil immersion. Electricity furnishes and regulates the force of light, which, placed in the focus of a parabolic aluminum reflector, reaches an intensity of eleven thousand candle-power.

DR. C. B. GILBERT died at his residence in Detroit, April 17. Dr. Gilbert was a popular and much respected physician. In medical circles he will be especially missed. His genial disposition, combined with his scholarly attainments, gave him a distinct personality, and he will long be remembered in gatherings that will now see him no more.

AN AMATEUR ANATOMIST.—Ernest Lasser, a lad of seventeen, recently passed himself off as a physician of the New York board of health, and required three Italian women residing in the tenement quarter to submit to a medical examination. When arrested the boy said he had been studying the books and thought it would be a good plan to gain some practical ideas by actual experience.

A GOOD PRESCRIPTION.—The following prescription is given by a Vienna professor to young physicians who call to take leave of him before embarking in their professional careers: ℞ Veritatis, humanitatis, fidelitatis, *aa* in infinitum. Misce. Fiat elixir vitæ. Signa.—To be used constantly throughout life. The distinguished professor, however, does not designate the druggist who can fill this prescription.

A SEVENTEENTH CENTURY LAPAROTOMY.—The *New York Medical Journal* quotes the following from the journal of John Evelyn, written from Lyden in 1641: "Among a great variety of other things I was shewn the knife newly taken out of a drunken Dutchman's guts by an incision in his side after it had slipped from his fingers into his stomach. The pictures of the chirurgeon and his patient, both living, were there."

MR. LAWSON TAIT has been in the law court on a charge of libel. He wrote a letter to a patient's husband, imputing death after myomectomy, as a secondary result of previous treatment by electrolysis. Mr. Tait went into the witness-box and maintained his opinion that the electrical treatment had seriously prejudiced the progress of the case and after hearing his statement, the charge of libel was withdrawn by the plaintiff's attorney.

A RECENT legal enactment in France prohibits the giving of any form of solid food to infants under one year of age without the authority of a prescription from a qualified medical man. The employment of the rubber-tube nursing bottle is also forbidden. Two hundred and fifty thousand infants die in France every year, and it is claimed that one hundred thousand of this number could be saved by intelligent care. The passage of this law is due in great measure to the efforts of the recently organized society for the protection of children, of which Dr. Rochard is the founder and president.

THE DOCTOR'S RETORT.—One of the brighest physicians of Portland and one of the ablest theologians of Bath were in the physiological room at Bowdoin medical school not long ago, examining, in company with others, microscopic slides, showing certain peculiar glands of the intestines. The physician at once launched out into a brilliant discussion of the glands and their relation to various diseases. The theologian grew tired after a time, and finally said: "You doctors know so much about the uncertainties of this world thatI should think you would not want to live." "You theologians," came the quick reply, "tell us so much about the certainties of the next that we don't want to die."

SIR WILLIAM BOWMAN died March 29. Few men had a more honored or prosperous career. He very early achieved repute by his histological and anatomical researches. He was only twenty-six years of age when he carried on his celebrated researches upon the kidney, with which his name will always be associated. Although brilliant as a general surgeon, and as a physiologist, he achieved still greater renown in the special department of ophthalmology. In 1851, he wrote his classical essay on the treatment of lachrymal stricture. In 1857 when Von Graefe advocated iridectomy as a cure for glaucoma, Bowman became a strenuous supporter of the new view of things. The "Bowman knife" is a memorial of this period. As oculist to the Moorfields hospital, he gave to that institution the renown his own achievements imparted. He was made a baronet in recognition of his scientific attainments. Sir William Bowman was a loveable man, gentle, sympathetic and helpful to collateral effort in science and in social progress. He had artistic tastes and loved rural seclusion and unostentatious ease. He was much revered in the profession for his scientific attainments, and by all who knew him, for the beauty of his character and the refinement of his mind.

RECENT PUBLICATIONS.

REVIEWS.

BACTERIOLOGICAL DIAGNOSIS.*

THIS is an exceedingly practical manual for use in the bacteriological laboratory. All the known bacteria are here tabulated, their appearance and mode of growth described, their color reactions determined, and a variety of information imparted all tending to assist the laboratory student in the differentiation of the various species of bacteria. The manual is divided into three parts, the first dealing with non-pathogenic bacteria, the second treating of the pathogenic varieties, and the third with the fungi. The classification is arbitrary and not in accordance with natural order, present knowledge of many of these minute organisms forbidding the establishment of serial arrangement of this kind. The pathologist seeking for information regarding any particular bacillus will readily find the desired information in these pages; for instance, if he is looking for the bacillus pneumoniæ of Friedlander, he will find out where it is found, its form and arrangement, whether it is motile or non-motile, the particulars of its growth in plate-culture or tube-culture, in gelatine, potatoes, agar-agar and blood serum. Then he will find its temperature, particulars, as to rapidity of growth, as to spore formation, and aerobiosis. Whether it be gas-producing, its gelatine reaction, its aniline reaction, and its pathogenesis are also dealt with. The work is altogether an extremely useful one in the present day, when our knowledge of disease is so intimately connected with the life history of these micro-organisms.

*By James Eisenburg, Ph. D., M. D., Vienna. Translated and augmented with the permission of the author, from the second German edition, by Norval H. Pierce, M. D., surgeon to the out-door department Michael Reese hospital, Chicago. Cloth. The F. A. Davis Company, Philadelphia.

THE YEAR-BOOK OF TREATMENT FOR 1892.*

THE year-book of treatment needs no introduction. It has already substantiated its claim to professional patronage by a successful career of many years standing. As a concise and practical compendium of recent advances in all departments of medical and surgical science, it stands among the best of its kind. The increasing size of the volume—this year it contains nearly five hundred pages—indicates that its able editors are not backward in utilizing all the material out of which their highly readable pages are compounded.

* Lea Brothers & Company, Philadelphia.

THE POCKET PHARMACY.*

THE pocket pharmacy would seem to be intended as a sort of *vade mecum* to accompany the pocket case. Twenty-four drugs and their uses are enumerated and described. It is doubtful whether the selection made by Dr. Aulde would be that usually made by a physician for daily or emergency use. It is doubtful whether every physician, if he had only twenty-four drugs to select from, would carry around tincture of bryonia in half minim doses, and probably the physician would have to be more deeply impregnated with Dr. Aulde's peculiar doctrines of cellular therapy before he would concede that arsenite of copper possessed the far-reaching efficacy the author claims for it. Notwithstanding the flavor of homœopathy which pervades the work the scheme of it is admirable. The physician who will thoroughly acquaint himself with the properties and therapeutical powers of the few drugs the author suggests, will find his pocket-case to be an armamentarium, which the best-stocked drug store in the country can do little to improve.

* By John Aulde, M. D. D. Appleton & Company, New York.

PRACTICAL MIDWIFERY.*

THIS book occupies a middle place between the elementary treatises and the more voluminous works on obstetrics. The author's experience as a teacher has enabled him to sift from these the practical information which is of most importance to the advanced student and practitioner, and to place it before the reader in a condensed and attractive form. The entire field of obstetrics from the beginning of pregnancy to the end of the lying-in period is treated entirely from a practical point of view, and the physician is told when and how to act. When more than one method of practice is advocated, the best, according to the author's interpretation, is given, in the belief that a clear description of one justifiable plan of treatment is likely to be of more immediate benefit to an inexperienced practitioner than an extended discussion of the relative advantages and disadvantages of many methods. There is little to criticise in the book, which is well written and illustrated, and occupies a place of its own in obstetrical literature. The publishers have dressed the book in red, with a blue gilt-lettered label. W. P. M.

* By Edmund Reynolds, M. S., assistant in obstetrics in Harvard university, etc. Four hundred and twenty-one pages. Illustrated. New York: William Wood & Company. 1892.

REFERENCES.

BOOKS AND PAMPHLETS.

"Tobacco, Insanity and Nervousness." By L. Bremer, M. D., Saint Louis.

"Eighteenth Report of the Superintendent of the Cincinnati Sanitarium. 1891."

"Insanity as Related to Civilization." By Orpheus Everts, M. D., Cincinnati sanitarium.

"Aphasia due to Sub-dural Hæmorrhage without External Signs of Injury; Operation, Recovery." By L. Bremer, M. D., and N. B. Carson, M. D., Saint Louis. Reprinted from *American Journal of Medical Sciences.*

MEDICAL PROGRESS.

MEDICINE.

THE MIGRAINOUS STATE.

CHARLES FERE (*Rev. de Med.*) likens the condition in which subintrant attacks of migraine are followed by stupor to the epileptic state. He relates the following case. A man, aged forty-three, first had, when eighteen years of age, ordinary attacks of migraine, recurring twice a month. Two or three years later homonymous hemianopsia was noted during the attack and for the quarter of an hour preceding it. In addition to the visual troubles there were sometimes noises in the left ear, and abnormal olfactory and gustatory sensations. Further, there were motor symptoms, namely, paralysis of the left face with difficult articulation of the left arm, and more rarely of the whole of the left side. These symptoms lasted for one to two hours and then disappeared slowly. On two occasions there was spasm of the face. These attacks, varying in character, were repeated twice a month for eighteen years. In July, 1888, one attack was quickly followed by another, and then by stupor for nine hours, and this condition of attacks and stupor lasted for three days. The seizures then resumed their wonted frequency. In February, 1889, there was a similar succession of attacks, and in July a single paroxysm was accompanied by complete motor aphasia. A little later there was a further series of attacks resembling those above mentioned. He was then treated with large doses of potassic bromide up to eight grains a day, and for four months he was free from migraine. There was no evidence of general paralysis, hysteria, diabetes, or arterio-sclerosis. Sensory and motor paralysis accompanying ophthalmic migraine may become permanent owing to the obliteration of the arteries involved in the spasm. The patients in whom this permanency occurs are mostly over fifty, and the author says this would appear to depend on the anatomical condition of the vessels. The urgency of treatment is the greater according to the age of the patient.—*British Medical Journal.*

DYSPNŒA AFTER TEA-DRINKING.

Mr. Jonathan Hutchinson, in the January issue of the *Archives of Surgery*, describes a case of alarming attacks of dyspnœa that were probably due to tea-drinking. The patient was a rather delicate man, of nervous temperament, and there was a suspicion of gouty heredity. The attacks occurred after breakfast, at which he drank tea freely, the meal being brought to him while he was yet in bed. During the attacks he had a corpse-like pallor, and seemed quite unable to take a respiration, on account of a pain like that of angina pectoris caused by the effort. The pain was referred to the epigastrium and lower part of the chest, rather than to the shoulder. Inspiration was accompanied with the greatest pain. The pulse was feeble during the time of the attack, and the patient could speak only in a whisper. The duration of the attacks was about an hour. An injection of morphine terminated the seizure quite promptly on two or more occasions. A careful thoracic examination, made by Dr. Gowers, resulted for the most part, negatively. At any rate, no organic affection was discovered that could explain the difficulty. The man was not a user of tobacco, but would imbibe tea freely, and this was sometimes followed by flatulence and a feeling of distention of the stomach. An over-indulgence in tea, especially with little or no food taken at the same time, will in some persons produce a sense of constriction behind the sternum, with some feeling of dyspnœa. In the case of a medical man who partook of tea of unaccustomed strength, and without eating any food, a distressing attack of dyspnœa occurred which lasted over thirty minutes. The recurrence of somewhat similar attacks having followed other indiscretions of tea-drinking on subsequent occasions, the mind of that physician became strongly impressed with the agency of strong tea in causing such attacks; so much so that for a long time he never ventured to drink tea except in his own home, where he knew its strength and quality. Mr. Hutchinson states that the painful attacks of the patient first above referred to bring to mind very distinctly those from which John Hunter suffered, and which he himself so graphically described.—*New York Medical Journal.*

SURGERY.

ON THE POWERS OF ABSORPTION OF THE MUCOUS MEMBRANE OF THE URINARY BLADDER IN HEALTH.

The investigation of the question as to the powers of absorption of the mucous membrane of the urinary bladder when in health, has brought forward during several decades such contradicting results, notwithstanding numerous experiments and many chemical observations, that it is but right to say, that there are as yet no positive and tenable conclusions, to be deduced from them.

All the experiments in reference to the question have hitherto been made, either with drugs introduced into the bladder, or with the normal ingredients of the urine itself.

Orfila, the two Segalas, Berard, Kaupp, Demarquay, Longet, Hicks, Paul Bert, Brown-Sequard, Gubler and Treskin, have made observations, both, on patients and also have performed experiments on dogs, and found that there

was clear evidence of absorbing power in the capillaries of the urinary organ in reference to drugs, also that slight endosmotic absorption took place of the normal components of the urine, especially of urea.

But these presumably positive data, have lost much of their force, in consequence of the published results of the following specialists.

Civiale denies in his "Traite des maladies des voies urinaires," all power of absorption by the bladder. Moreover, the clinical observations of Kuss in Strassbourg, of Sir Henry Thompson, the physiological experiments of Alling in Paul Bert's laboratory, of Susini, and lastly of Paul Cazeneuve and Charles Livon, have produced negative results only; although these experiments have been conducted with the greatest accuracy and conscientiousness, especially by Susini, partly on animals and partly on the experimenters themselves.

The reason of this non-absorbing quality of the organ, according to Susini, Cazeneuve and Livon, is to be ascribed to the peculiar quality of the epithelium of the bladder. In the opinion of these authors the epithelium of the bladder in health, is endowed with absolute impermeability, forming a regular barrier to all absorption of either medicinal substances or of the component parts of urine. It is only in consequence of traumatic or other inflammatory lesions that the epithelium loses its normal quality, and so becomes unable to withstand the absorptive process.

According to Susini's experiments, the impermeability of this epithelium continues for several hours even after the death of the animals.

Cazeneuve and Livon found moreover, that if absorption of the mucous membrane has been established the same is carried on much more rapidly when the bladder is dilated than when in a state of contraction.

But in what manner these phenomena are to be explained, whether it was owing to the shifting of the epithelial layers, or whether it depended on an actual loss of continuity of the same, not one of these observers has ventured to say.

All the results therefore of the numerous experiments on both sides are still without any definite conclusion. It is evident, therefore, that the question, so important both in a physiological as in a pathological point of view, requires further elucidations in order to arrive at a final conclusion.

With the view of further elucidating this subject, I have undertaken certain experiments during the last winter, and have performed them in the physiological laboratory at Leipzic.

To enable a more fundamental investigation of this important question, I determined to base my experiments not only on chemical researches alone, by examining analytically the absorbed substances, but also by keeping the histological basis as well in view. With this object I have examined microscopically the condition of the epithelium of the dilated and of the contracted urinary bladder in a great number of cases.

In consequence of their exquisite diffusive quality I have used solutions of urea and of common salt as an injection in dogs, whose ureters had been extirpated by Professor Ludwig; but these labors of testing the absorption of the natural ingredients of the urine have not as yet been completed.

The experiments of Susini consisted in injecting a warm solution of one-half per cent. of iodide of potassium in his own bladder. These I have repeated on

myself. I used not only the iodide of potassium but also a solution of one-half per cent. of chloride of lithia.

On the first occasion the analysis of the gathered and prepared saliva, searching any trace of iodide, gave us a negative result. In the second experiment, however, injection of chloride of lithia, I have found in the saliva, with the aid of Professor Drechsel, by means of spectral analysis, the characteristic red line of lithia. After the third experiment, a second injection of iodide of potassium we found in the charred remains of the saliva, which were treated with carbonate of soda, nitrate of potash and chloroform, a feeble reddish-blue coloring, therefore, traces of iodide.

To ascertain the condition of the epithelium, according as the bladder was in the state of a distention or of contraction, a ligature has been applied to the urethra of three dogs, and left for six, twelve and eighteen hours; by this means, dilatation of various degrees was effected. The dogs were then killed by curare, and the several bladders placed in chromic acid, for the purpose of hardening them, and by means of carmine alum and acetic picrocarmine, microscopic preparations were made.

These microscopical preparations of contracted, slightly dilated and overdilated urinary bladders, have been examined by me in numerous instances, and the micrometric measurements were made together with the assistant of the physiological laboratory, Dr. Gaule. These experiments have shown a remarkable difference in the thickness of the epithelial layers, according to whether the bladder was contracted, slightly or considerably dilated.

I undertook, with the purpose of determining the real extent which the epithelium covers in the contracted or dilated state of the bladder, the laborious task of counting the epithelial cells of all the stratum, in different sectional parts of the numerous specimens.

The repeated and careful calculations showed a remarkable diversity in the number of the cells, in the different parts of the contracted and dilated organs.

Also the drawings of the epithelial cells of the different stratum of the mucous membrane showed us the remarkable variations in forms of cells, according as the bladder was in a contracted or in a distended state.

Lastly, I have undertaken, with Dr. Gaule's assistance, volumetric measurements of several urinary bladders, which brought out remarkable differences in the capacity of these organs.

From all these experiments the following conclusions may be deduced with almost perfect surety, namely: there is neither a displacement nor a break of continuity in the epithelial stratum, whatever may be the degree of dilatation and consequent charge of capacity of the bladder, but owing to the extraordinary elasticity, with which the epithelial stratum is endowed, there is a decided change of shape in the individual cells, proportionate to the change of the entire epithelial structures.

A more detailed description of my experiments will be published in *De Bois-Raymond's Archiv fur Physiologie.*

Before the completion of my labor, I received a communication about the experiments of Professor Maas and Dr. Pinner in Fribourg, and of Docent Dr. Fleischer, and Dr. Brinkmann in Erlangen, which refer to the same subject. These most important experiments also prove that the power of absorption of

the mucous membrane of the bladder, in comparison with the same membrane of other organs, is very slow and insignificant; which circumstance, according to these authors as well, is to be attributed to the very considerable thickness of the bladder epithelium.—Preliminary communication from the laboratory of experimental physiology in Leipzic by Dr. B. London, Carlsbad.

ANOTHER CASE OF A RAMROD THROUGH THE BRAIN.

An Australian journal gives the following case, which is nearly as remarkable as the crow-bar accident to Mr. Phineas Gage: "Robert Campbell, a young man connected with the postal department, was admitted to the Melbourne hospital, with a pistol ramrod through his brain. The story of the accident is that Campbell was out shooting with a muzzle-loading pistol. While he was ramming home the charge the weapon exploded, and the ramrod, which was composed of fencing wire, with a lead plug at the end, made by the victim, was sent through his cheek across the eye, and came out at the top of his head. Dr. Harris stated that when the man was admitted to the hospital it was found that the ramrod had passed through his cheek, on the left side of the nose, into the infraorbital plate of the superior maxilla, right through the eye, going in its course through the superior orbital plate of the frontal bone, the brain, and coming out at the top of the skull, about the middle of the internal portion of the parietal bone. The wire portion of the ramrod was sticking out of the skull about six inches. Dr. Charles Ryan, assisted by Dr. Harris, trephined the skull, having first cut off the wire. When the bone was removed, the leaden base came with it, and the eye, which had been completely destroyed, was taken out. Antiseptic lotion was then syringed through the eye-socket, along the course the ramrod had taken, and by this means the wound was well washed. The night after admission of Campbell his temperature was about 110° Fahrenheit; but during the next four days it came down to normal, 98.4° Fahrenheit; and since then he has made an uninterrupted recovery, and is now convalescent."—*Medical Record.*

A NEW USE FOR ALUMINIUM.

On the 8th of March letters patent were issued to the firm of A. A. Marks, of New York, for artificial limbs constructed in part of aluminium.

This metal, with its unlimited uses, seems to be peculiarly adapted for surgical appliances, instruments, and artificial limbs; its low specific gravity and its great comparative strength are qualities that are desirable to be combined in an artificial leg or arm.

There are amputations of the lower limbs that surgeons deem desirable to do, without sacrificing more of the member than the parts involved. We refer to amputations technically termed tibio-tarsal, tarso-metatarsal, and medio-tarsal. These amputations have always been in disfavor with artificial-limb makers, who have almost unanimously decried them, and in too many instances have persuaded the surgeons to sacrifice much of a healthy leg merely to obtain a stump that would better accommodate the artificial limbs that they were able to produce.

The new artificial leg constructed of aluminium, combined with the rubber foot, is adaptable to these amputations. The socket of aluminium incases the

stump, and, on account of the strength of the metal, the socket does not increase the diameters of the ankle to an objectionable degree in order to obtain the requisite strength; the metal is cast into the proper shape to give ease and comfort to the wearer; the aluminium socket is terminated by a rubber foot, which not only stimulates the natural foot, but provides a soft, springy medium to walk upon and a resistant phalangeal ball to rise upon while walking, running, or ascending stairs.

It is obvious that by this invention the amputation can be conditional upon the injury, and the artificial limb conditional upon the amputation. In this alone the invention of the aluminium and rubber leg will prove not only a boon to the one who has suffered the amputation, but the solution of a problem that has many times perplexed the operating surgeon, as it eliminates all the objections heretofore pressed against amputations in the region of the tarsus. The surgeon may thus rejoice in being able to observe the old and consistent law of amputating with the least sacrifice.

Aluminium also plays an important part in the construction of strong and durable artificial arms. The socket of an arm made of that metal is light and strong, and will enable the wearer to subject the artificial arm to severe uses without danger of destruction. It will not crack from overstrain like wood, it will not become soft and limp or foul from perspiration like leather; it is lighter than any other metal, and is amply strong.—*New York Medical Journal.*

MARCY ON FEMORAL AND VENTRAL HERNIA IN WOMAN.

THE author advocates the dissection of the sac to its very base, which is sutured across and removed. The internal ring is carefully closed by a line of deep, double, continuous tendon sutures. The canal is narrowed and closed in a similar manner, and the wound is sealed with iodoform collodion without drainage. The operation is conducted with the strictest antiseptic care, and since Dr. Marcy was the first to use and publish the advantages to be derived from buried animal sutures, and systematically to extend their applicability in the general field of surgery, we quote his emphatic directions: "There is but one rule, and it cannot be too rigidly enforced—the *aseptic* suture must be *aseptically* applied in *aseptic* structures, and the wound must be maintained *aseptic*. The failure of either of the above-mentioned factors not alone endangers the results, but may be followed by the most serious consequences. Modern surgery demands of the operator every safeguard to ensure an aseptic wound, but he who uses buried animal sutures must take, if possible, even greater precautions, since infection carried into a wound thus firmly closed is for obvious reasons attended with much greater danger than in a wound united by interrupted sutures which, at the end of a few days, are to be removed, and when drainage is relied upon to permit the escape of infective or foreign material. It is in part on account of defective technique, the use of drainage and the too-often septic wound that failure to effect a cure after hernial operations so generally occurs."

The author began to use the buried animal suture in operating for the cure of hernia in 1871, and since that time has for the most part used it in the closure of all operative wounds, and in all his operations for the cure of femoral hernia, where the integrity of the intestine has not been involved he has never observed

any subsequent symptoms indicating danger, and so far as he has been able to learn there has not been a single recurrence. There is little pain, and even œdema of the tissues does not ensue. After a few days in bed the patient is allowed to sit up. In some instances he has permitted the use of the chair the second day without any apparent harm. He never advises the subsequent wearing of a truss." * * * "If it can be demonstrated that femoral hernia is curable, then the advisability of the operation should be taken into consideration, and if it can be proved that the cure remains permanent it adds much to the argument in favor of operative measures, but where it is demonstrated that, under proper precautions, based upon an accurate anatomical knowledge of the structures involved, the operation is not severe, does not cause long detention from active duties, does away with the punishment inflicted by the life-long wearing of a truss, and is almost without danger, there remains no reason why all the sufferers from femoral hernia should not profit by surgical measures, and demand to be restored to the ranks of active service." Dr. Marcy makes an equally strong plea in behalf of surgical interference for the cure of sufferers from umbilical and ventral hernia. In umbilical hernia he dissects the peritoneal sac quite within the margin of the ring, sutures it across at its base and resects it. The subsequent steps of the operation are conducted under irrigation. There are conditions when it is wise to resect the ring and close as in an ordinary laparotomy, but the method which Dr. Marcy more generally recommends is one quite peculiar to himself. The structures composing the ring are divided laterally upon the plane of the abdominal wall about one-half of an inch in all directions. This admits the coaptation of the sundered parts, and by lines of strong continuous tendon sutures the separated edges are coapted in a way greatly to broaden the united parts. This widens the line of union to an inch or more instead of bringing together the narrow edges of the tendinous ring, and beside affording this great depth to the united parts, it brings together refreshened surfaces in a high state of vitalization, likely to be followed by firm union. It also admits the joining of the tissues in three distinct layers of strong sutures. As in the other forms of hernia, the skin itself is closed by a line of running or lacing sutures taken from side to side through the deeper portions of the skin only, which admits of its coaptation by sutures entirely hidden from view. Such a wound requires no drainage, and it is permanently sealed with collodion.—"Proceedings of the American Association of Obstetrics and Gynecologists."—*Annals of Surgery.*

GYNECOLOGY.

HORRORS OF CHILD MARRIAGE.

THE following horrible details, from medical observation, of the atrocities legalized under British rule in India in the marital possession of little girls, are extracted from a memorial to the government, signed by fifty-five professional ladies practicing medicine in that country. We find the memorial in the *Medical Missionary Record* for December.

The following instances have come under the personal observation of one or another of the petitioners:

(1) Aged nine. Day after marriage. Left femur dislocated, pelvis crushed out of shape, flesh hanging in shreds.

(2) Aged ten. Was unable to stand, bleeding profusely, flesh was much lacerated.

(3) Aged nine. So violently outraged, as to be almost beyond surgical repair. Her husband was the possessor of two other living wives. He spoke very fine English.

(4) Aged ten. A very small child, and entirely undeveloped physically. This child was bleeding to death from the rectum. Her husband was a man of about forty years of age, weighing not less than one hundred and fifty-four pounds. He had accomplished his desire in an unnatural way.

(5) Aged about nine. Lower limbs completely paralyzed.

(6) Aged about twelve. Laceration of the perineum extending through the sphincter ani.

(7) Aged about ten. Very weak from loss of blood. Stated that great violence had been done her in an unnatural way.

(8) Aged about twelve. Pregnant, delivered by craniotomy with great difficulty, on account of the immature state of the pelvis and maternal passage.

(9) Aged about seven. Died in great agony after three days.

(10) Aged about ten. Condition most pitiable. After one day in hospital was demanded by her husband for his "lawful" use, he said.

(11) Aged eleven. From great violence done her person will be a cripple for life. No use of her lower extremities.

(12) Aged about ten. Crawled to hospital on her hands and knees. Has never been able to stand erect since her marriage.

(13) Aged nine. Dislocation of pubic arch, and unable to stand, or put one foot before the other.

The memorial refers also to the "religious" sanctions and superstitions, supporting and promoting this fiendish custom, which deter the British government from interfering with it as a matter of religious right! Such indeed it is, from the heathen point of view, and its natural and necessary fruits are such as above described, by which we must judge of the "religion" that addled sentimentalists are running after, and of the Arcadian social and moral system which English publicists protest against disturbing by the intrusion of Christian missionaries and reforms.—*The Sanitary Era.*

CASE OF IMPENDING FATAL COLLAPSE: IMMEDIATE RESUSCITATION BY TRANSFUSION OF SALT SOLUTION INTO THE PERITONEAL CAVITY.

THE following case is one of some special interest, and I am induced to publish it in detail:

Mrs. ——, aged forty-two; married twenty years, three children, youngest ten years of age; no miscarriages; menstruation regular, duration two days; no menstrual pain, but has of late felt a "gnawing soreness" at epigastrium. Has always been weak and suffered from nervous prostration. By "spells," has attacks of vomiting without any apparent cause. Has never been jaundiced.

During the past six weeks has noticed her abdomen becoming enlarged, but suffered no pain there. The measurement of the abdomen at highest point, on admission into my hospital, was as follows during successive days: Thirty-four and one-third inches; thirty-four and one-half inches; thirty-five inches; thirty-five and one-half inches. The enlargement shows a tendency to increase notwithstanding active purgation.

On a careful abdominal examination it was proved that the enlargement was due to a free fluid in the cavity and not to encysted. It was therefore a question as to the cause. After careful consideration I formed the opinion that the ascites depended upon malignant disease. The quantity of ascitic fluid seemed too large for that caused by tubercle; neither had there been a history of previous attacks of peritonitis, so constant in tuberculosis of the peritoneum. The temperature also did not vary from normal standard at any time during her illness. In fact her present condition was great and progressive emaciation, prostration, and abdominal enlargement. After she had been under preparatory treatment for about one week I opened the abdomen. Three gallons of dark-brown, limpid fluid flowed out, and at the bottom of the pelvis I found two large, hard bodies—the ovaries; they were non-adherent, nodular, and about the size and shape of a human kidney; they were stony hard to the feel, and attached by a short pedicle to the broad ligament. These ovaries were removed, catgut ligatures being used and the pedicle of each dropped. On further examination of the abdominal contents it was found that the mesenteric glands were much enlarged in certain clusters. The peritoneum was covered with secondary deposits about the size of crystal-like millet seeds. High up in the epigastrium was a large cluster of irregular masses located in the omentum, but which were not thought expedient to remove, ultimate good being very doubtful. The cavity was well cleansed and closed with silkworm gut sutures, leaving a drainage tube in the lower end of wound. The Trendelenburg posture was used, which doubtless tended greatly to prevent shock on the sudden escape of so large a quantity of fluid. When put to bed her condition was very good, the pulse being about 120 and full.

All went well until about eight hours after the operation. I was then summoned by the nurse, who said the patient was pulseless and in a state of collapse. I found her in a very strange condition. There was not present that collapse we see from hæmorrhage, but a restless, sighing, semi-incoherent condition. The radial pulse was a mere flicker, could not be counted, and the heart was evidently strained to its utmost to recover balance. I used hypodermics of brandy and also of ether with extract of digitalis, but no effect whatever was experienced on the heart during the half hour I awaited a change in the pulse; on the contrary, it was gradually becoming less perceptible at the wrist. The yawning and sighing became more frequent, she became very restless in the bed, the respiration, from being very shallow, became gasping, and in short, she was rapidly passing into a dying condition. Recognizing the fact that this alarming condition was most probably due to the sudden withdrawal of so large a quantity of fluid (three gallons) from the abdominal cavity, and thereby removing firm and constant pressure from the heart and large abdominal vessels, the patient was in fact bleeding to death within her own vessels. The remedy was evident, and without another moment's loss of time I transfused

about three quarts of sterilized salt solution (temperature 110°) into the abdominal cavity, through the glass drainage tube fortunately inserted at the operation. When I had transfused this quantity she began to scream and vomit violently. I removed the tube and closed the opening by firm packs of cotton-wool. The strange, and I may say marvellous, result of this procedure now became apparent. The pulse at the wrist was beating full, strong, and counted one hundred and ten per minute. The time between the extreme state of collapse described and the taking of the pulse after the transfusion could not have been, at the outside, more than five or six minutes. I do not therefore think this remarkable change was brought about altogether by absorption of the salt solution, but in great part by the mechanical effect of pressure upon the vessels and heart, especially the latter, by lifting the diaphragm upwards. Also, the activity of the absorptive power of the human peritoneum is well known, and is estimated at the rate of five to twelve pints per hour, or the weight of the whole body in from twelve to twenty-four hours. If this estimate be correct, there must have been, in my case, a large quantity of the transfused fluid taken into the circulation in a very few minutes—enough, certainly, to turn the balance in the case of a rapidly failing heart. On the other hand, I do not think pressure of the fluid had all to do with the result, because on examining the abdomen some hours after the transfusion, it was as flat and free from fluid as when the patient left the operating room. Absorption here was complete, and an intense desire on the part of the blood-vessels for fluid was evidenced by the rapid draining of the peritoneal cavity. The blood-vessels were, however, satisfied with this supply, and the heart's beat did not average more than one hundred and fifteen during the following three and a half weeks she remained in my hospital. There was no effect on the temperature centres, as the highest temperature registered was 101.5°, and that only on the second day; it then fell to normal and remained there.

The result of peritoneal transfusion in this case has been exceedingly instructive to me, and I am sure will also be to others interested in these sad cases. Death from shock after exhaustive hæmorrhage directly the patient leaves the operating table is by no means rare. We do not hear of all of them because they are not reported, and we can therefore form only an approximate idea of the real mortality. Enemata of salt solution and hypodermic injections of the same have been tried with good results, but both of these methods are slow and limited in regard to the amount of solution which can be used in a given case. Peritoneal transfusion has not these advantages. The marvellous rapidity with which the fluid passes into the circulation will immediately resuscitate a failing heart, and places the patient from a dying to a living condition. In all cases where large tumors have been removed from the abdomen, the cavity should be filled with sterilized salt solution, and experience will show its great value during convalescence. I observed also that my patient did not suffer at all from the distressing thirst so noticable after operations, and attributed so much to the effects of ether instead of to the blood-loss. It is certainly a strange way of giving a patient a drink, but, notwithstanding, it is equally as safe as the usual method, provided the solution is sterile and the operation has been strictly aseptic in technique.—By Dr. T. Johnson Alloway in *Montreal Medical Journal.*

THERAPEUTICS.

TREATMENT OF DIPHTHERIA.

A DISCUSSION took place recently at the Saint Petersburg medical society (*Saint Petersburg Medicinische Wochenschrift*, Number VIII, 1892) during the course of which Masing spoke again very strongly in favor of the local application of a two per cent. solution of carbolic acid in spirit every two or three hours, night and day. Mossin gave the statistics of the Nicolai children's hospital for seven years (1883-89). The general mortality was as follows: Cases without laryngeal complication, eleven and three-tenths per cent.; with laryngeal affection, fifty-eight per cent.; septic inflammatory cases, ninety per cent. He gives the methods of treatment followed at various dates, and arrives at the conclusion that these variations in treatment were not accompanied by any demonstrable corresponding variation in the percentage mortality. The earlier cases were treated by perchloride of iron and chlorate of potassium, to which was afterwards added hydrochloric acid in sufficient quantity to ensure the presence of free chlorine. The carbolic acid solution above mentioned gave similar results, neither better nor worse, but it had certain inconveniences—for instance, the necessity for very frequent applications to the throat, which fatigued the patient, who, if young, might resist; and the further chance of injury to the mucous membrane; in addition, there was the difficulty in making the application to the whole of the parts affected, since all might not be in sight, as well as the chance of carbolic acid poisoning. Mossin gives some statistics which confirm the opinion that affection of the nose is a very serious complication. The percentage death rate of two hundred and thirty-seven cases in which the fauces alone were involved was five and one-tenth; of two hundred and ten cases in which the nose also was affected, it was fifty-four and seven-tenths. Serk gave the statistics for 1888 and 1889 of the Prince of Oldenburg's hospital in Saint Petersburg; the percentage death rates were—faucial diphtheria, sixteen and five-tenths; faucial and laryngeal, sixty and five-tenths; septic inflammatory cases, eighty-six and one-tenth. For similar reasons to those given by Mossin, he was of opinion that local antiseptic applications could not be relied on as a routine treatment. A discussion on the same subject has also taken place at the medical society of Buda-Pesth (*All. Wien. med. Zeit.*, March 15, 1892). Szontagh recommended gargling with a twenty-five or thirty per cent. solution of alcohol with or without one or two per cent. of carbolic, and both he and Flesch advised the internal administration of cyanide of mercury—one drachm of a solution of one in ten thousand or fifteen thousand. Reyburn (*Medical News*, March 5, 1892) uses a spray of corrosive sublimate solution, one in five hundred (sublimate, one part; tartaric acid, five parts; water, five hundred parts). This is sprayed liberally at least once an hour for the first twenty-four or forty-eight hours. After the membrane has disappeared he uses a weaker solution (one in one thousand or two thousand every two hours); every hour alternately with the sublimate he paints the fauces and tonsils with a solution of chloral hydrate—twenty grains in one ounce of glycerine. The object of the painting is to obtain a clean surface on which the sublimate may act. Internally he gives quinine, two or four grains every three hours until sixteen or thirty-two grains are taken,

according to age. Jacques (*Rev. des Mal. de l'Enfance*, March, 1892) discusses at length the principles which should be followed in the treatment of diphtheria and concludes that local antisepsis is the first necessity. He says that gargles are the most effectual method of bringing remedies into contact with the false membranes without running any danger of injury. He gives the preference to perchloride of iron on the ground that it is astringent, hæmostatic, and antiseptic; he prescribes a gargle with glycerine and water, and asserts that any child over six or seven years old ought to be capable of being taught to gargle. Immediately after gargling he washes out the mouth with a large quantity of a three per cent. solution of boric acid. This is done not only to remove the unpleasant taste of the iron, but also to wash away particles of secretion or false membrane partially detached by the gargling; the washing is done with an irrigator, and may extend to the nasal cavities. At first the patient gargles every hour—one hour with the perchloride of iron gargle, the other with a gargle containing two grains of carbolic acid to one and a half drachms of water with fifty minims of glycerine. As food he prefers milk, but insists that no milk should be allowed to remain in the mouth; therefore immediately after the milk he gives a drink of wine and water, or spirit and water. If the child cannot be induced to gargle, Jacques employs a spray of perchloride of iron only every four hours to avoid fatiguing the child who resists, but the mouth may be washed with the irrigator every hour, since children do not, as a rule, object to it. In cases in which he has been able to apply this line of treatment before the onset of laryngeal symptoms, he has not seen this complication arise, but he adds that the total number of such cases was small.—*British Medical Journal.*

MEDICAL MELANGE.

Roto-Lateral Curvature of the Spine.—In those cases where the deformity can be temporarily corrected by posture, postural exercises alone are advised in the way of treatment; in those where the deformity can be partially corrected, exercises are advised, with or without support as there may or may not be weakness; in the severer cases supports are advised, and the plaster jacket, leather corset, and wood corset are advised.—*Canadian Practitioner.*

Thiol in Skin Diseases.—Buzzi's (*Charite Annalen*, 1891, Band XV) experiments in Professor Schweninger's clinic in Berlin lead him to regard thiol as superior to ichthyol. It is valuable in many diseases of the skin, and possesses the following advantages over ichthyol: it is clean and never irritates, whereas ichthyol is impure and often irritates; ichthyol smells disagreeably, thiol does not; ichthyol spots linen, thiol does not.—*American Journal of Medical Sciences.*

Tracheal Tugging in Aortic Aneurism.—Two cases are reported in which the diagnosis of aneurismal dilatation of the arch of the aorta was made from the history and physical symptoms of the patients, and in which tracheal tugging was present. The author remarks on the diagnostic importance of this sign, which is obtained by taking hold of the cricoid cartilage and gently pressing it upward—the patient's neck must be extended and mouth closed— a distinct downward "tugging" of the trachea with each cardiac contraction is then perceived.—*Lancet.*

THE POSTURE OF THE PUERPERAL PATIENT.—Duke (*Medical Press*) considers the usual custom of keeping the puerperal patient upon her back for a long time after labor to be most injurious. He claims that drainage of the birth-canal is least thorough in this position, and that retro-displacements of the uterus frequently result from this custom. He favors the semi-recumbent position upon the hip or the sitting posture for a few moments after the first twenty-four hours. These positions favor involution and promote the action of the bowels. The best posture to favor the delivery of the placenta is the prone position, and the puerperal patient should assume this posture for a short time daily.—*American Journal of Medical Science.*

PASSAGE OF A RENAL CALCULUS BY THE BOWEL.—The patient, male, thirty-five years old, suffered during several days with characteristic symptoms of renal colic, indicating the presence of a calculus in the right ureter. Energetic treatment gave only partial relief. The symptoms then abated to some extent, and a tender spot appeared in the course of the right ureter. Fifteen days after the beginning of the attack the pain ceased and the tenderness diminished; fæcal matter was discharged in the urine, and the stools presented a urinous odor; starch appeared in the urine after starch enemata. Cystitis developed, and there was severe tenesmus. After persisting several weeks the symptoms of recto-ureteral fistula disappeared.—*Medical News.*

PNEUMOTHORAX FOLLOWING ABORTION.—The patient was found in a condition of shock, with intense dyspnœa and slight cyanosis. A few days before, she had had an abortion, followed by chills and fever. Examination showed pneumothorax of the right side. A steady volume of air was aspirated but without giving relief. The patient died a few hours later. Autopsy showed septic endometritis; a septic thrombus of right uterine vein, extending into the ascending vena cava; hæmorrhages, and a small infarct in the left lung. The right pleura was full of foul-smelling air, the lung was collapsed, and in the anterior border near the surface was a small abscess-cavity which had ruptured into the pleura. A portion of exudate over the rupture acted as a valve, preventing the return of air from the pleural cavity.—*Medical News.*

THE EXAMINATION OF THE EYES SEPARATELY FOR COLOR-BLINDNESS.—Mr. Snell calls attention in the *British Medical Journal* to the importance of testing each eye separately for color-blindness. He details a case which came under his observation in which there was green color-blindness of the left eye alone, and a second in which there was red blindness in the right eye and incomplete green blindness in the left. With both eyes open both patients correctly sorted Holmgren's wools, and would probably have passed an ordinary examination for color-blindness. The importance of sufficient examination of every person who may occupy a position where good color vision is requisite cannot be too firmly insisted on, and every means should be employed to make such examination perfect. Such a condition is probably rare, for Fontenay, in the *Archives of Ophthalmology*, in 1881, states that he examined two hundred and seventeen persons, and found the two eyes in each case always alike. But this is insufficient to prove that such cases as those here mentioned exist, in which the exclusion of the use of one eye, even for a brief period, might be attended with the possibility of disastrous results.—*New York Medical Journal.*

ABORTIVE TREATMENT OF BUBO.—To abort buboes following chancroids, Welander, of Stockholm, recommends early injections of the benzoate of mercury in a one per cent. solution, with one-half per cent. of the chloride of sodium. Wash the skin first with sublimate solution; inject on one or two points seven and one-half minims of mercurial liquid; cover with sublimated wool; put on a pressure bandage, and change twice a day. Rest in bed, if possible. The infiltration, as a rule, diminishes in a few days. Considerable fluctuation may develop, but it also soon disappears. The results of this treatment are very favorable. Out of the first thirty-three cases reported, tending to suppuration, this event was prevented in thirty. In all the author has treated one hundred buboes in this way, with thoroughly satisfactory results in seventy-eight.—*Archiv. f. Dermat. u. Syphilis.—Satellite.*

PUNCTURE OF THE SUBCUTANEOUS TISSUE IN DROPSY.—Dr. Gerhart recommends these punctures in cases of marked dropsy. This little operation is performed in the following manner at his clinic: The patient is seated in an arm chair, with the legs extended over a board which rests upon a wooden receptacle. The legs are brushed with soap and water and washed with sublimate solution, while the physician disinfects himself as carefully as before an operation. The knife is placed in a carbolized solution or a hot two per cent. soda solution. On the anterior surface of each leg four to eight incisions are made through the skin. Immediately after, the legs are covered with a layer of gauze, then with thick layers of sterilized cotton held in position by a few turns of a guaze bandage. The patient remains in a sitting posture as long as possible during the day, and at night when in bed a sheet of waterproof material is placed under the legs. As soon as the cotton becomes saturated with fluid it is removed, and a fresh dressing applied under aseptic precautions. If necessary the cotton or gauze is loosened from the skin by irrigation with a three per cent. carbolic or one to two thousand sublimate solution.—*Deutsche Medicinische Wochenschrift.*

THE TREATMENT OF COMPLICATED RETROFLEXIONS OF THE UTERUS.—Dr. O. Kustner formulates the following rules for the treatment of these cases. If reposition cannot be accomplished by the ordinary manipulations the patient should be anæsthetized to confirm the diagnosis. If adhesions are found they should be torn according to Schultze's method, the uterus restored to its normal position, and a proper pessary inserted. The patient should remain in bed until symptoms of reaction are no longer present. Thure-Brandt's method of separating the adhesions and replacing the uterus gives excellent results, but requires too much time. For this reason Kustner prefers Schultze's method, or laparotomy. If the latter operation is resorted to the incision should be made low down near the symphysis pubis, the uterus is then drawn up by forceps, so as make tense the adhesions which are divided with the Pacquelin. After the uterus has been freed from adhesions the question of ventro-fixation comes up. If the patient is young, and the tubes and ovaries healthy, the uterus should not be fixed, but a Thomas' pessary should be applied. On the other hand, if the patient is at or near the menopause, the uterus should be attached to the abdominal wall by two or three silkworm gut sutures; and if the tubes and ovaries are seriously diseased they should be removed.—*Samml. Klin. Votr.—Wien. Med. Presse.*

COLCHICINE FOR THE EYE.—Colchicine is recommended by Dr. Darier in certain eye affections, and is administered in pill form, each pill containing one sixty-fourth grain of the drug, of which from one to two or four, or even six pills, can be taken daily. Care must be taken to instruct patients to reduce the dose as soon as intestinal derangements manifest themselves. Some patients have taken as many as two hundred pills without complaining of unfavorable symptoms.—*Medical News.*

THE TONGUE IN SCARLATINA.—Neumann (*Deutsche med. Zeitung*, 1891, Number 63, page 715) states that in this disease the tongue passes through three stages of change: (1) Tumefaction of the mucous membrane with disturbance of the epithelium; (2) Desquamation; (3) Regeneration of the desquamated epithelium. The appearance of the characteristic "strawberry" tongue is caused, as is well known, by the swelling of the filiform and fungiform papillæ deprived of their epithelium. Of forty-eight patients examined for this symptom, the "strawberry" tongue was found in thirty-eight (seventy-nine per cent.); in four the tongue was in one of three stages mentioned above; while in six no modification was observed. Dyspeptic troubles precursory to the disease often so modify the tongue that the mucous membrane shows no new modification under the influence of the exanthem. The "strawberry" tongue was observed to last for one day in three cases; two days in five; three days in six; four days in four; and more than four days in the other twenty cases. It appeared during the first three days in thirty-two per cent. of the cases, and upon the fourth day in sixty-eight per cent. The intensity of the cutaneous eruption seemed to bear no relation to the modifications of the tongue.—*American Journal of Medical Sciences.*

WHAT CASES SHOULD BE DRAINED AFTER ABDOMINAL SECTION?—Dr. Rufus B. Hall, of Cincinnati, has drained in every case of abdominal section which he has made since 1886. The objections to the drainage-tube that have been given at various times are that it is a source of septic infection, a frequent cause of hernia, a foreign body, a cause of irritation, and not infrequently omentum becomes fastened in the perforation, preventing its easy removal. As to the first objection, the author has seen no case of sepsis developed from the use of the drainage-tube; but it is evident that, unless the utmost care is taken, such an accident might occur. The tube should be pumped out every hour or two until it is removed. In his own cases he has seen two hernias developed in the line of cicatrix, but in neither of them did the hernia occur at the point where the drainage-tube was placed. He has seen no appreciable disturbance from irritation of the tube since he commenced using the small, perfectly smooth tube with no side perforations. The small, perforated tube of Dr. Price fulfills the requirements for abdominal drainage perfectly. If the dressing is so arranged as not to make pressure upon the outer end of the tube, no apprehension need be entertained as to it causing trouble from irritation, provided it be removed just as soon as the fluid becomes straw-colored. If one employs the old style large tube, with large side perforations, there is danger of omentum becoming forced through the openings, causing difficulty in removing the tube and possibly favoring the development of hernia; but in the use of the small tube with the narrow perforations, these dangers are reduced to a minimum.—*Medical Record.*

THE INFLUENCE OF ALCOHOLIC DRINKS ON THE URINARY SEDIMENT OF HEALTHY PERSONS.—Dr. Glaser has examined the urine of persons who were in good health after the use of alcoholic drinks, employing the centrifugal apparatus of Steinbeck. Beside the formation of uric acid and calcium oxalate crystals; the most important findings were an increase in the number of leucocytes and the appearance of cylinders and cylindroids. The increase in the leucocytes was so constant that the writer was able to decide as to a preceding excess in drinking. With the continued use of alcohol, the increase was so great that one would think one had a specimen of urine with pus in it. Hand in hand with this went the augmentation of the number of cylinders. He concludes as follows: (1) Alcoholic drinks, even in moderate quantities, act as irritants to the kidneys, causing the emigration of leucocytes and the formation of cylinders; further, they favor the excessive production of crystals of uric acid and calcium oxalate. This is either due to the increased metabolism of the tissue or an alteration by the alcohol of the relations of solubility of the salts of the urine, so that the oxalate of lime and uric acid are precipitated. (2) This action, after a single indulgence, does not extend over thirty-six hours, and with continuous use is cumulative.—*Deutsche Medicinische Wochenehr.*

INSANITY AND TEA-DRINKING.—During the examination at the Waltham Abbey petty sessions, of a woman who is charged with the wilful murder of her two children, a statement of some importance was made by the divisional surgeon of police, Dr. G. Fulcher, with reference to the habits of the prisoner. From some writing which was found on her, it was evident that the poor woman had meant to perish with her children, having been driven to this extremity by the belief that her children were hopelessly ill, and that she was being slighted by those from whom she had been accustomed to receive kindness. Dr. Fulcher found, on examining her, that, with the exception of a "weak heart," her physical condition was good, but she had been suffering for some time from headaches, palpitation, and sleeplessness. On being interrogated with regard to tea-drinking, she said she had been in the habit of taking a large quantity, that she had given it up, but had recently resumed the habit in consequence of her trouble. Dr. Fulcher was of opinion that the prisoner was the subject of melancholia, and he expressed the belief that the taking of tea in excess tended to undermine the constitution. The powerful effect of alcohol in excess as a nerve poison is a matter of daily experience. That many of the ailments from which women suffer, are at least aggravated, if not excited, by excessive indulgence in tea, not as an infusion, as it ought to be, but as a decoction, is equally well known; and, although we are not prepared to admit that this habit would actually induce a condition of melancholia, there is little doubt that in a woman of a neurotic temperament, especially if her food were deficient in quantity and of poor quality, the use of this beverage in excess would be one of the factors in producing and perpetuating a condition of mental instability. It would be well if those to whom the frequent cup of tea from the pot, which has a permanent place at so many firesides, and has become almost a necessity, as they think, recognized fully the pernicious effects of this over-indulgence, effects only surpassed in importance by those of the occasional "drop of gin," of which so much is heard in the outpatient department of our hospitals.—*Lancet.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

INFLUENZA: ITS DIFFERENT FORMS, AND ITS TREATMENT.*

By J. BYRON NEWMAN, M. D., Detroit, Michigan.

Notwithstanding that influenza (called in France la grippe) has been an extensive topic of discussion during the last four years, I thought a short consideration of the subject this evening would not be considered superfluous, especially on considering the serious results of the disease upon man, society and even nations.

ANTIQUITY OF INFLUENZA.

We have no correct history of influenza prior to the midnight of the dark ages—the tenth century—but we have no reason to doubt its existence prior to that time. Classical writers of Greece and Rome speak of small-pox as existing one thousand years before Christ; if so, why not influenza? I look upon all specific diseases as due to some parasite and, as it was proved in the *Contemporary Review* a few years ago by Huxley, Tyndall and others, that there is no such thing as spontaneous generation, the inference is inevitable that all parasites existed from the beginning of all creation; furthermore as I look upon all epidemics as having their origin in endemics, and, as the local causes of endemics have always existed in the world, it is quite probable that the sons of Noah were sneezers as well as their descendants, provided always that their digestion was no better than that of the latter. Dr. Koch failing to inoculate some guinea-pigs with the cholera bacillus stated that these immune ones digested all the bacilli.

EPIDEMICS AND ENDEMICS.

At one time epidemics of influenza were looked upon as blasts from the stars and on account of the supposed influence exerted by the stars during the

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

prevalence of an epidemic of influenza, the disease was called influenza. But my firm conviction is that we have to go neither to the stars nor to volcanoes for the cause of influenza, so long as we have an organic creation fixed; and pathological and physical mutations occurring upon the surface of our own planet.

I look upon all epidemics as an overflow or outflow of germs from endemics, or in other words, as wandering endemics; and upon endemics as depending upon local factors, such as the fermentation of vegetable debris and the decomposition and zymosis of animal matter, especially after local floods when millions of animals are left dead upon the plains or low lands.

According to the *London Lancet*, the journals of Calcutta used to speak of endemics of influenza as existing along the banks of the great rivers of Asia after the subsidence of local floods. The disease was called catarrhal fever. It affected man, horse, ox, sheep, dogs, and even birds. To be brief, I would beg to submit that the great rivers of Asia and the high latitudes of Warsaw and Moscow have contributed more endemics and epidemics of influenza to the world than any other localities on the face of the globe.

ETIOLOGY OF INFLUENZA.

Since Chaveau and Burdon Sanderson discovered that the specific contagium of influenza, instead of being an exhalation or miasm, was a living germ, the majority of the profession has looked upon the disease as of bacterial origin. Many attempts have been made by Klebs, Lipari, and others, to individualize the microbe, but heretofore without success. However, with renewed vigor and improved devices, it would appear according to a French journal, Lucas Championeire's *Journal de med. et chir. prat.*, published on the 25th of March, that the little parasite has been discovered by Pfeiffer, Kitasato and Canon, all of Berlin. They found it to be a comma bacillus, I did not have the pleasure of seeing the journal, but Dr. Becelaere, with the permission, this evening, of this meeting, will read a translation of this discovery.

LOCAL MANIFESTATIONS OF INFLUENZA.

Clinically, influenza may be divided into four kinds, namely, the catarrhal, gastro-intestinal, nervous and the pulmonary, according to the vulnerability of different organs; for organs, like different individuals, appear to be differently affected; yet, sometimes all four kinds are present in the same individual, though in general they are not.

(1) CATARRHAL.—In this the mucous membrane of the eyes, nostrils, mouth, fauces, pharynx, middle ears, larynx and bronchi, suffer the most from the specific virus. From these regions there will be more or less discharge of specific character. From the middle ear the disease sometimes extends to the cerebrum, giving rise to purulent pachymeningitis and abscess of the brain. When the disease extends through the infundibulum there will be vertigo, with a frontal longitudinal pain, and an aching of the eyeballs. When the disease extends from the middle meatus of the nostril to the antrum of Highmore, there will be a diffused pain in the superior maxilla with a peculiar sensation of "edge on the teeth." The lining of the alæ nasæ will be more or less inflamed, with some rhinitis. The tongue will either be rough with a yellowish-brown

coating, or red and inflamed according to the degree of fever present. When the case is of the asthenic type, and slow and persistent, the lips may be vesiculated and the whole of the mouth, uvula, pillars, fauces and pharynx, will present a yellowish-brown appearance. When the disease extends through the Eustachian tube to the tympanic cavity there will be more or less otitis media and otalgia. The larynx, trachea and bronchi may be more or less inflamed, and each attended by its subjective and objective symptoms. The aphonia attending the laryngitis is sometimes complete, and very persistent; the bronchitic cough is also apt to be persistent, and sometimes resembles the dry, nervous cough. When fever is present it varies in degree from 99° to 105° Fahrenheit; it is generally remittent, and ushered in with a chill. The fever may terminate in a few days, or in a week or two, or in seven or eight, if there be no constitutional dyscrasia. The period of incubation varies from three days to three weeks; there is generally more or less prodromal malaise. In mild cases there is no fever. The prognosis is favorable—ending with a crisis of diarrhœa or profuse perspiration. The catarrhal kind corresponds to the epizootic of the horse, and to the murrain or rot of the ox and the sheep.

(2) Gastro-Intestinal Form.—In this form the burden of the disease falls upon the abdominal viscera. There may be fearful nausea, more or less vomiting, and diarrhœa. The mucous congestion of the gall-duct and of the hepatic ducts, may arrest the bile and cause jaundice. The ducts of the urinary tract may be congested also, and cause retention and suppression of urine. The vasal congestions are due no doubt to paralysis of the nerve periphera. The prognosis is favorable when the diarrhœa is not a critical one, which causes a collapse.

(3) Nervous Form.—In this form the nervous system receives the burden of the disease, or rather suffers the most from the albuminoid ptomaines. It indicates a weaker organ and a bad heredity in this line. From the mucous membrane the poison is absorbed into the blood, from which it may act on the nerve centres and heart, causing all kinds of nervous lesions, as the painless and insidious cerebritis and arachnitis, as well as the violent pachymeningitis; neuritis, dysæsthesia and conscious hemiplegia, are more common in malarial districts, but not limited to them. The depressing effect of the poison upon the heart-action, together with the vaso-motor paralysis present, favors the development of cerebral apoplexy by thrombi and emboli—a lesion, however, which does not occur very often. Dr. Prentiss, of Washington, reports three cases of apoplexy as occurring in this manner. The vaso-motor, sensory and sympathetic systems, are all liable to be affected. The cephalalgia, neuralgia, and other algias, as myalgia, with limb-aches, are sometimes very severe. The sequelæ of nervous influenza, as neurasthenias, psychopathias, pathological cerebro-mental phenomena, and, sometimes, violent tragedies effected by nerve-cell injury, are legionary, which in the catarrhal form may be entirely absent. The fever may vary in degree. The prognosis is favorable for life, but not, sometimes, for intellect.

(4) Pulmonary Form.—In this form the lungs suffer the most. The presumption is that there is a weakness in the line of the lungs, giving rise to a suspicion of some hereditary dyscrasia, as the gastro-intestinal did to hereditary dyspepsia and, possibly, to some hereditary kidney-lesion. The pulmonary kind

may point to a hyperinotic dyscrasia, or to a tubercular one. This vulnerability of different organs may be extended to individuals, and is illustrated by three men in a malarious district, living under similar conditions, but being affected differently—one acquiring the quotidian ague, another the tertian, and the third a remittent fever, notwithstanding that the cause—the malarial plasmodium—remains the same and works in the same manner. The fact that the aged and feeble are more vulnerable to the influenza poison, favors the contention that weak organs are more vulnerable than strong ones; but exposure and cold, under all circumstances, will be factors against either the strong or the weak. The ordinary expression of the pulmonary form will be capillary bronchitis and pneumonia, always together.

Influenza Pneumonia.—The influenza pneumonia is always secondary to capillary bronchitis, and is thus different from the primary lobar (croupous) pneumonia. In primary pneumonia the blood is in a hyperinotic condition, and consequently the exudate partakes of the fibrinous character; in influenza pneumonia the blood fibrin is diminished, and serum is in excess, and consequently the exudate is principally of the serous character, with only slight consolidation and hepatization. The lower and middle lobes are the ones ordinarily affected.

Cause of Influenza Pneumonia.—Manfredi, Klebs, and others, succeeded in causing tumor-like granulations in the lungs by injecting specific pneumococci into animals, especially by the aid of the factor of cold. On the other hand some writers contend that centric hyper-irritation and the consequent paralysis of the pneumogastric nerve, are the cause, and this in the face of the fact that there is more centric irritation in the nervous kind, and equally as much paralysis in it, and in diphtheria, puerperal fever, typhus fever, etc., without any pneumonia. Cardiac weakness cannot be considered as being the cause, for if blood stasis should once ensue from this cause, the cardiac action that once permitted it would never be able to overcome the accumulated blockage in the lungs without the aid of cardiac tonics; whereas we often find influenza pneumonic processes run their course to a successful issue without any. In primary pneumonia and in inflammatory rheumatism, the blood is in a hyperinotic condition, and if both are due to this condition the question arises what occult force or agency determines the joint or the lung lesion? To answer this we must admit a vulnerability, hereditary or acquired—a defective cell. We flippantly say (from the force of uniform habit) that lactic acid in excess causes rheumatism. Why does it not cause primary pneumonia? To say that it never does is no answer. By vulnerability I mean the fixed weakness belonging to some part or whole of our organism—it may be chemical, physiological, physical or pathological in its nature. The vulnerability determining primary pneumonia is not settled yet more than it lies in the pulmonary line. Similarly there must be a vulnerability, a fixed condition, favorable for the habitation of the specific pneumococcus in influenza pneumonia, to which we will have to relegate the cause of the lung-lesion, independent of central irritation—in order to account for the process being developed in influenza and not in diphtheria, etc.

Symptoms of Influenza Pneumonia.—These vary with epidemics. In some epidemics of asthenic character they are pretty well marked, while in others they are more of the serous and asthenic type. Generally speaking, the patient

will have a semi-cyanosed appearance, with marked muscular debility. The pneumonia is secondary to capillary bronchitis. This bronchitis will be always known by the whitish, viscid pellets which adhere together, to form irregular masses, which contain no air—being expectorated from the bronchioles. The pneumonic process will be known by the glairy adhesive, brownish, russet sputa, containing air bubbles. The pneumonic process may last only two or three days then cease two or three days, to be repeated again. I had a case lately in which it was repeated three times. If the catarrhal kind should be a complication there will be a large amount of congested blood expelled from the naso-pharyngeal tract. During the period of resolution casts of the bronchial tubes may be expectorated, as they are in plastic bronchitis. This is not necessarily a fatal sign as some writers would have it. The tongue is rough and brown. The pneumonic process may commence three days after the initial fever, or it may not commence for three or four weeks after. Perhaps at the end of three or four weeks, on finding our patient bathed in profuse perspiration, with clean, moist tongue, pulse and temperature normal, we inform the friends that the patient is out of all danger; but on finding our patient next day with a temperature of 102° Fahrenheit or 104° Fahrenheit, pulse 110 or 120 per minute, tongue dry, brown and coated, the submaxillary glands swollen, his breath very offensive, and unable to swallow, we feel no little chagrin at our want of caution the previous day. A sudden change of this kind must be attributed to an acute attack of ptomaine poisoning. During the course of this attack, another pneumonic process may be developed, and to be brief, the patient will be better and worse, better and worse, until the glands suppurate, in a week or two, and their contents pass off, when the patient will recover or pass to phthisis.

Physical Signs.—The physical signs will vary. The dulness on percussion may be very slight. On auscultation, there will be more or less bronchial breathing, with a suppressed or rough vesicular murmur. On account of the serous character of the exudate, there may be considerable wheezing and whistling. Sibulus, crepitation and subcrepitation are sometimes present, and the effort of the right heart to force the blood through the lungs, will be accentuated, at the second left intercostal space.

TREATMENT OF INFLUENZA.

This will depend on the kind of influenza we have to deal with. In all cases when the prodromal symptoms, such as chills, malaise, sneezing, or catarrh of any part of the alimentary or respiratory tract, should occur, the patient should take a hot bath, retire to bed in a warm room and remain there until better; or he should drink a quart or two of hot gruel and retire. Both will not be necessary. He should eat no solid food for two or three days. A continued perspiration may effect resolution in one, two or three days; if not we have to treat symptoms as they arise. I always give twelve grains of sulphate of quinine daily, with a little gray powder, for the first week, then the quinine alone until the patient is better. I never exceed twelve grains daily, but this quantity I always find a useful tonic and antizymotic; it is also one of the best medicines we have for the liver.

In the gastro-intestinal kind with nausea and vomiting, without diarrhœa, we order copious enemata of hot water and a mustard poultice on the epigas-

trium, with hydrocyanic acid dilute, soda bicarbonate and carminatives, internally. If diarrhœa should be present we give solid opium, and use hot turpentine stupes on the bowels. Sometimes we give alum whey, naphthol beta in milk and boiled crackers with boiled milk.

For the fever I always give antifebrin.

For the catarrhal form we give a mild purgative, mild expectorants at first, and inhalations of steam.

For the nervous form we give aconite, antifebrin, and in cases of insomnia full of boisterous illusions, delusions or hallucinations (common in drunkards), we give sulphonal in two doses of fifteen grains each, three hours apart. This will generally be sufficient for twenty-four hours. It may be slow but it is generally sure. But if much cephalalgia or nerve pain be present, the antifebrin is better. For nerve pains or aches of any kind, or in any part of the body, I find antifebrin in ten grains, or twelve grains, or fifteen grains, a splendid analgesic. I have a case of locomotor ataxy at present, in which the lightning pains are subdued, with complete satisfaction, by ten grains or twelve grains of antifebrin. After this dose the patient will sleep all night, waking up in the morning refreshed and free from pain. I satisfied myself that the analgesic properties of one-half grain of morphine does not equal in any way that of ten grains of antifebrin. I find the same dose to have equally as good effect in a case of sciatica under my care. In gravedo, otalgia, etc., it has a similar effect. In children I give from two to five grains in syrup or with sugar on the tongue. The treatment of the nervous sequelæ will not be considered at present.

For pneumonia we continue the quinine and antifebrin when indicated. We order a hot poultice (the meal spread on coarse flannel and covered by cotton or oiled silk, will be more manageable for the hairy adult). If the case be asthenic we give brandy and milk, brandy with carbonate of ammonia, muriate of ammonia, and for the hard cough of convalescence we give syrup senega, syrup scillæ, vinum ipecac, sulphate of morphine, iodide of potassium. During convalescence, strychnine is the best, and a sojourn to a high, warm altitude—providing there is no tendency to hæmorrhage nor hæmoptysis. Sometimes ergotin will be of assistance in arresting excessive hæmorrhage. Salol will be useful as a disinfectant, five grains *ter in die*. The salicylates I do not like—being too nauseating and depressing. If lymphadenitis should spring up, I introduce a knife through the middle of the gland, and cut outwards, keep the wound open with iodoform gauze, and apply a hot poultice. In a few days or in a week the gland will suppurate and pass away, after which the patient will recover or pass to phthisis. During the lymphadenitis, the patient's mouth, tongue, pharynx, etc., may be dry, brown, and his breath very offensive. For this condition I order inhalation of iodoform and turpentine, equal parts, from a vial. The neck of the vial is introduced into the mouth, and the patient's lips closed upon it, so that he receives the full benefit. We give the iodide of ammonium internally, in some bitter tonic, for the glands; also salol, fifteen grains to thirty grains daily.

What about the heart in pneumonia? In influenza pneumonia the cardiac muscle and nerves are marked by debility, and aconite, nor any other cardiac sedative, will seldom be required. But there is a blockage, a resistance in the lung, which will be indicated, at the left second intercostal space, by the effort

of the right heart to force the blood through the lung. Sometimes the blockage and resistance are sudden, and the blood pressure will be enormous. Can we do anything to assist the feeble heart? Shall we give digitalis and make a battering-ram of the heart? Let us look for a moment on the jockey at the Derby, or at our own blue ribbon. What does he do to assist the heart of his flying steed before calling upon him for the grand effort required for the limited time. Knowing the danger of high blood pressure and the consequent cardiac or vascular rupture, he warms up his horse and fixes the blood in the surface veins. By filling these the heart will be able to force the blood to all parts of the body with less resistance. Now if we open a free collateral circulation in pneumonia by hot baths, hot sponging, nitro-glycerine, diaphoretics and course friction, we assist the feeble heart very much. If the heart should show symptoms of failing we give strong coffee and milk, carbonate of ammonia and brandy, citrate of caffein, quinine, brandy and soft boiled eggs together, and if the heart should show signs of strain or dilatation, digitalis. Two boiled eggs daily, with a quart or two of milk, all through the disease, will form the best nourishment.

SANITATION.

Perfect sanitation and cleanliness will be indispensable. The patient should be told not to swallow his own sputum; and the different excreta should be antisepticised by a bichloride solution, one in one thousand.

THE BICHLORIDE OF MERCURY IN THE TREATMENT OF SURGICAL SEPSIS.*

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Responding to the request of the chairman of our committee on surgery, a week ago, I very cheerfully consented to prepare a paper for presentation here to-night, and so, while in common with those who are accustomed to speak in public places and for the purpose, also, of bringing this exordium to a triumphant conclusion, I must not fail to remind my hearers of the littleness of the *writer* and the comprehensiveness and practicality of the *written*, and also to enunciate in language unmistakable, the fact that the aim and end of this unpretentious effort is not so much *instruction* as *suggestion*,—with the hope of eliciting a very fruitful discussion on the part of my talented colleagues, I proceed.

A very complicated case of operative surgery occurring of late in my practice, has set in motion, within my sensorium, a train of thought bearing upon the relation between mercuric bichloride and the treatment—particularly the *internal* treatment—of surgical affections, septic in nature.

I am well aware of the fact that septic difficulties are much less common to-day than they were during the pre-antiseptic era, and also that the word sepsis is a cloak behind which a great pile of ignorance yet lies hidden; however, we would all be more satisfied were we to see still less of such trouble and we note, with great gratification, the fact that the generic, as it pertains to the investiga-

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tion of this form of hostility to man, is becoming the specific at a tolerably satisfactory rate of speed as time flies.

Let us look a bit into this matter of sepsis. The generic has stated for years that septic diseases were due to the absorption into the circulation of poison associated with suppuration; the specific comes along and lights up the features of the generic by proving that such poison is the product of micro-organic life and, furthermore, that many varieties of micro-organisms, putrefactive and pyogenic, figure as etiological factors in the problem. This, of course, holding true when we consider the subject as a whole and do not proceed to subdivisions.

Dipping deeper into the fountain of knowledge we observe that different writers and investigators classify septic disorders differently. We have been brought face to face (in the books, at least) with fermentation fever, sapræmia, septicæmia, pyæmia, septico-pyæmia et cetera, ad libitum, when there is really but little difference between them.

Two varieties are sufficiently inclusive, namely, septicæmia and pyæmia, and as to the close relationship which obtains between these two, hear the following:

Senn,* in the definition of pyæmia, states that "pyæmia is a general disease caused by the entrance into the circulation of pus or some of its component parts, charactized by recurring chills, an intermittent form of fever and the occurrence of metastatic abscesses." Then again, under heading of septicæmia,† after stating that "septicæmia" is a term "used to designate a general febrile affection caused by the introduction into the circulation of the products of fermentation or putrefaction," he adds, "there can be no doubt that true progressive sepsis, if not invariably, is, at least, frequently caused by the same microbes which produce pyæmia."

This shows the near consanguinity of the diseases. As we now perceive, pyæmia must always be caused by the chemical products of active, pyogenic microbes in localities permitting an attack by the resulting toxines upon the nerve centres and associated with infected and infecting embolic masses in organs remote from the nidus of infection; whereas septicæmia, although acknowledging allegiance to the same cause (if we eliminate the auxillary feature which, after all, is a result itself, as well as a cause, namely, embolism), may also be produced by a similar action on the part of putrefactive bacteria.

General sepsis may be otherwise divided, as follows:

(1) *Septic intoxication*, in which merely the toxines or ptomaines have gained entrance into the blood; and

(2) *Septic infection*, in which the microbes, themselves, are found in the vital current, multiplying and working off their finished products there.

Of course, the latter is a very serious and alarming condition and is found in both pyæmia and septicæmia—*always* in pyæmia and *frequently* in septicæmia, being then known as progressive sepsis—whereas the former is a comparatively simple matter, provided that the infection-atrium can be exposed and disinfected early.

Practically, then, pyæmia and progressive sepsis or septicæmia are nearly, if not quite, the same thing, for although in the one we may note the presence, later on, of metastatic abscesses, and in the other, their absence, they are both

* "Principles of Surgery," page 333.

† "Principles of Surgery," page 303.

due to pathologic bacteria—often to identical pathologic bacteria—in the blood and thus beyond the reach of surgical manipulation.

Distinctions may be drawn very fine in these matters and, in fact, they *are* drawn much too fine, in my opinion, when we realize that the treatment for the one, at least early in the affection, must be indentical with that for the other.

Progressive septicæmia is a very fatal disease and so, of course, is pyæmia, though characterized by a less rapid course than that of the former; but neither, of necessity, is fatal in every case and I will venture boldly to state, without fear of successful contradiction, that the man is not yet born (nor the women either) who can tell, at the inception of either of these diseases, whether he has a case of progressive sepsis without subsequent development of metastatic abscesses or a case of pyæmia *with* such subsequential evolution.

Let us go a step further. There is absolutely nothing to abort the belief that a case of true pyæmia might, possibly, be terminated, either by death or by recovery, prior to the development of the first of the characteristic multiple abscesses.

Without any desire on my part to further burden the assembled Greeks with symptomatology and differential diagnosis I will enter into the merits of my case:

Mrs. A. S. F.; age fifty-six; married; no children and never had any; case of scirrhus of left breast; growth, together with neighboring indurated axillary glands, removed January 14, 1892; wound healed throughout entire extent, without a drop of pus or complication of any kind, in two weeks. Between two and three weeks after date of excision an ischio-rectal abscess developed; patient had become very much constipated and the manipulation necessary to rid the rectum of stony scybala may have operated as a cause; abscess was early incised, giving vent to a relatively large quantity (four ounces) of foul-smelling pus mixed with black and decomposed blood-clots; abscess-cavity communicated with that of the rectum about two inches above anal margin; all intervening tissue was divided, as in operation for fistula-in-ano, in order to prevent development of latter as well as to provide for free drainage; pus-covered surface, immediately as well as subsequently, was thoroughly washed and disinfected with strong solutions of $HgCl_2$ (one to one thousand) and even afterwards, as would be supposed from the natural drainage of the parts, remained as sweet as one could expect in that locality; bowel-movements always followed by mercuric washing.

The case ran along for ten days with temperature ranging from 99+° Fahrenheit to 100+° Fahrenheit; pulse somewhat elevated. Referring to notes and recalling date of incising abscess (February 2, 1892), I find the following:

February 14, 1892: Patient has had a serious time, chills having occurred and temperature mounting to 102+° Fahrenheit; pulse 120; no pain, but very restless at night; is taking quinine and nitro-muriatic acid also beef, iron and wine; no chill for several days.

February 15: Chill last night; temperature 102.4°; rectum exposed, wound irrigated with $HgCl_2$ solution (one to two thousand) and dusted with a mixture of boracic acid and iodoform.

February 21: Serious septic trouble evident, probably pyæmia; prognosis bad; chills frequent (daily or every other day), followed by temperature, 104+°;

pulse very rapid and weak, 140; icteric hue to skin, but conjunctivæ clear; vomiting; diarrhœa; tongue dry and scabby; complete anorexia; great prostration; countenance pinched, pallid, covered with cold perspiration and indicative of impending dissolution. Patient, empirically, put upon mercuric bichloride (one thirty-second of a grain every four hours).

March 1: No chill since February 21, though algid states have several times been impending (nine days); condition much improved; no particularly bad symptom now present except complete absence of appetite; prognosis better.

March 10: No chill as yet, nor sign of one; temperature normal, or nearly so, every day; tongue clean and moist; appetite returning; jaundice gone; pulse slower, fuller and stronger; looks bright; smiles and appreciates a joke; general condition good and convalescence well initiated; sits up a little in bed.

This is the case, and this, the treatment. The bichloride was gradually stopped, hydrochloric acid substituted for a week or two and that stopped. The patient is now on the high road to recovery with general condition and appetite excellent.

Now, gentlemen, here are some questions for the official discussion of the paper, in particular, and the other members of the academy, in general, to dwell upon as I take my seat.

(1) Was this a case of pyæmia or progressive septicæmia, for it surely must have been one of the two?

(2) What difference would it have made in the treatment had the one been proved to obtain and not the other?

(3) Was the bichloride of mercury instrumental or not in saving this woman's life?

In conclusion, I will briefly express my own opinion as regards these queries.

(1) It is impossible to state which of the above forms of sepsis this case really typified, for the only difference which I can observe between the two is the fact that in the one, death or recovery follow the onset of the disease too soon to permit of the development of metastatic pus foci, while in the other sufficient time elapses, from the inception, *for* such development.

(2) It can make no difference which form of the disease you have as regards the therapeutics of the case, and

(3) It is my firm belief that the bichloride *was* instrumental in the saving of this patient's life, and my theory as to its action, in that particular, is as follows: The amount of mercury given in such cases, although not by any means large enough to immediately destroy the microbes which exist and multiply in the blood, *is* sufficient to, at least partially, sterilize that blood and thus render it a less fit habitat for micro-organic life. The succeeding generations of bacteria, thus, would possess and oppose less resistance to untoward influences and this lack of individual and racial vitality would become an inheritance. Therefore, provided the untoward influences (the bichloride in this case) were maintained, the species, according to the inflexible law of natural selection, would deteriorate and sooner or later become extinct. If this were true we would expect a more or less gradual subsidence of the symptoms and that such subsidence did occur in the above case the accompanying history amply shows.

STAMMERING.*

By ALONZO BRYAN, M. D., Detroit, Michigan.

The author of this essay is strongly impressed with the idea that the importance of the subject of stammering is greatly underrated, both by people and physicians. In truth, there is an apathy which is painful. More than this, there is even a tendency on the part of the altogether thoughtless, to ridicule those who are the victims of the malady. Stammerers are made the butt of jesters, and even the subjects of the facetious in newspapers.

Now, the truth is, that no class of sufferers undergo more exquisite and prolonged tortures than do those who are affected by chronic stammering. In many instances, stammering induces an abridgement of the intellectual development; it viciously modifies the temper; produces chronic melancholy; suppresses ambition; and, it is believed, often shortens the days of him it torments, by means of the depression it induces.

To stammer inveterately and badly is perhaps quite equivalent, in its distressing influence, to an utter inability to articulate at all. The mental pain induced by the patient's disability is perhaps in proportion to his proper conception of the uses and value of the practical importance of speech. In youth, stammering retards and frequently overwhelms the scholar in school; and, later, it often precludes him from general society. Many stammerers of a high order of natural intellectual ability, are, by their malady, prevented from assuming positions of emolument and satisfaction; and those who are of lowly mental endowment are frequently rendered abject and wholly helpless. But it is in the most enlightened and refined circles that the potency of the misfortune to stammer is most severely felt. If the calamity of such were simply as those of the tower of Babel, then they might aptly learn a new tongue; but to stammer badly is to be debarred from the facility of utterance in all languages. To stammer extremely is indeed one of the bitterest sarcasms of fortune.

Therefore, let us proceed to elucidate some of the principles of stammering, and to lay down some of the principles of its treatment.

Stammering as a pathological, or disordered, condition, is a defective and difficult articulation of words, which may occur in persons of apparently perfect physical integrity. It seems to be an affection purely functional, and to be a result of mal-education, and consequently of mal-habit, of the nerve centers which preside, either immediately or remotely, over the organs of articulation. It should be borne in mind that stammering is not an insanity of the nerve centers concerned, but is simply a vicious modification of function. Still, its nature is such that we would call it a disease or malady—a degradation, a disorder—but a condition in which, as yet, no physical changes have been discerned. Furthermore, it is a condition, so far as we know, wholly neurotic; all indications to the contrary being purely negative.

The act of stammering usually consists in the attempt of a person to articulate an elementary sound while the vocal organs remain in the position proper for the utterance of the sound which precedes it in the same syllable. We believe this is the difficulty in the great majority of all the cases of stammering;

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

most of the variations from the principle being simply symptoms of a secondary nature, as the enunciation of extra sounds, and the manifestation of irrelevant muscular movements, etc. The utterance of the stammered sound or syllable most frequently, we believe, consists of the indefinite and unbroken prolongation of an elementary sound; or, in the reverse of this, the frequent and rapid repetition of the sound, the repetition, however, being prolonged indefinitely. Perhaps the most common exception to this mode of stammering is when the patient is erroneously convinced of his inability to articulate a certain elementary sound under any and all circumstances; his conviction having had its origin in the effect of a traumatic lesion long past. A person may have had a wound about the mouth, temporarily disabling him in certain forms of utterance, but the traumatic condition may long since have wholly passed away, leaving the individual under the profound but erroneous impression that he is absolutely unable to perfectly articulate certain sounds. In such a case, the effect is usually confined to a single letter, and sometimes to only a single word. The patient's delusion is generally easily removed by making an appeal to his reason. In the case of the ordinary stammerer, however, the reverse of this principle is usually true, for he is perfectly and confidently aware that there are times when he has complete power to utter the sounds that are commonly most difficult to him; as while singing, or when alone, or when repeating a word upon which he has just experienced a severe paroxysm of stammering.

The worst stammerers are capable of stammering upon every letter of the alphabet, and upon every word in the language. In addition to this, they stammer between words. This latter remarkable phenomenon seems to be caused by the sufferer taking a sort of run and jump, as it were, to get over the sound upon which he anticipates difficulty—prefixing or interpolating an extraneous sound from which to gain the momentum of an impulse. Also in his terror in presence of a difficult sound, he will sometimes substitute a more easily articulable sound than the right one. In some cases, an extreme stammerer will take on tonic spasm of a number of the facial muscles simultaneously; the spasm radiating from the seat of the primary effort at articulation, seemingly every muscle of the face, and even some of those of the neck being brought into tetanic action. Under such a condition, momentary vertigo may ensue, tears flow from the eyes, and perspiration break out upon the face. Marked physical and mental exhaustion follow such a paroxysm. It should be added to this that there are a few cases in which, during a spasmodic paroxysm, the abdominal muscles, the diaphragm, and the thoracic muscles participate. In such instances, immediately afterward, the patient is capable of excellent, though somewhat enfeebled articulation. It should be noted that the spasms incidental to stammering are both clonic and tonic; and that both varieties may occur in the same person, although one person may be affected only by clonic, and another only by tonic spasms.

Stammering occurs vastly more frequently in children than in adults. Also, it seems to occur oftener in the male than in the female, although one of the most dreadful cases of tonic stammering we ever saw was that of a girl eighteen years old. It is more persistent in those of small intellectual caliber, and disappears more readily in persons of high or good intellectual capacity.

Having now described some of the phenomena of stammering, it seems to the

author that it is well to state a physiological principle that appears to figure largely in the production and perpetuation of the malady. It is the principle of *physiological antagonism.* Within the brain antagonisms of functions may be aroused. If a person attempts to hold the breath in a prolonged manner, he will soon perceive that there is a disagreeable antagonism going on within himself. His effort becomes painful, and the antagonism becomes very intense. Presently there is a surrender somewhere, and the experimenter resumes his respiration. In this experiment, the following explanation would seem to express the *modus operandi.* It is perhaps some portion of the cerebrum that issues an inhibitory command to the medulla oblongata to arrest respiration. The respiratory center obeys for a time, but remonstrates—in fact, gently resists at first, but finally overcomes the antagonistic force of the cerebrum, and sets the mandate of the latter at naught by putting, again, the machinery of respiration in motion. We say that perhaps the so-called "sense of suffocation" is simply the *expression of an antagonism between the medulla oblongata and the cerebrum.*

Now, the pathological phenomena of stammering would seem to strongly sustain the principle of intra-cranial, or encephalic, antagonism. From what is known by means of analogical evidence, it may well be supposed that ordinary language effort is carried on by an inferior part of the brain, independently of any particular direction by the higher brain; that is, there is an automatic machinery for common utterance, in which the superior brain is not much concerned—in fact, concerned no more than to give a general order for the execution of the details of speech. In such instance, the higher brain-mass acts as it does when it sends a general impulse to the spinal cord for the purpose of precipitating the act of walking, which act is carried out in detail by its servitor, the cord; the cord itself resembling, in the principle of its conduct, the above mentioned automatic language machinery. Now, when this language machinery is mal-educated, and as a consequence has formed a mal-habit, we can readily perceive what difficulty may ensue. It is perhaps exactly the same as that which occurs in stammering. In fact, stammering is perhaps a proof of the division of labor between the encephalic masses; and at the same time a proof of the antagonism that may be aroused between, and among, them. *Indeed, it is upon this principle of antagonism that we would rivet the attention of the investigator.*

We have already seen how that clonic and tonic spasms ensue during the efforts of the stammerer, how that vertigo, perspiration, and exhaustion take place, and how that the abdominal muscles, the diaphragm and the thoracic muscles seem to participate in what appears to be a fierce struggle. Pathological antagonism between the cerebrum (in which is located the primary and supreme language centre), and the inferior ganglia of language, is the only hypothesis that will explain the matter. That a struggle is going on during a paroxysm of stammering is as plain as day.

So, by reflection, it will be seen that nearly all the primary phenomena of stammering conform to this principle of antagonism between ganglia.

We now proceed to further note the appearances of stammering, and then to consider its treatment. Among the things that enhance the difficulties of the stammerer are whatever temporarily decreases the power of the heart, as common embarassment, fear and loss of assurance; and decrease of the rapidity of nervous conduction, as from cold, or from the placidity incidental to quietude.

During the hot weather of summer stammerers are often greatly improved, only to get worse again upon the supervention of the cold of winter. Buoyancy of spirit affords relief, despondency increases the trouble. Consciousness of the presence of superior and arrogant persons plunges the common stammerer into difficulty. The presence of a benign superior aids him. There is a popular impression that the trouble of the stammerer is greatly increased by active emotional excitement. We are of the opinion that this is incorrect and that the reverse holds good. Vigorous mental excitement usually aids and relieves the stammerer, while sluggish mental movement renders his impediment worse. Of course a blind rage or a state of joyous ecstasy embarasses and clogs or totally destroys the utterance of almost any one—of the man of glib tongue as well as of him of impediment of speech—but an indignant sense of wrong felt in the bones of the stammerer, or a sense of healthful joy, often does away, temporarily, with all difficulty of utterance. We remember an instance in which a most inveterate stammerer was forced out by clamor to speak before a popular audience upon a subject in which he was deeply interested. He arose enveloped in his own confusion, and commenced to stammer in the most extraordinary and seemingly abject manner. He was about to sit down in despair, when his eye accidentally rested upon the gloating and glaring face of an enemy in the crowd, whose moment of supreme joy seemed to have been reached in beholding the discomfiture of the stammerer. Suddenly the stammering man arose above his life-time misfortune and delivered a most eloquent oration without the least further manifestation of lingual impediment. In his case we suppose the heart was stimulated to the manifestation of great force by the irritation; great quantities of blood were sent rapidly to that most distant yet super-eminent portion of the brain, the cerebrum, which effectually controlled the inferior ganglionic masses concerned in articulation.

It is an interesting circumstance that stammering is worse in the forenoon than in the afternoon. In connection with this circumstance it is notable that human temperature is lower in the forenoon than in the afternoon; and also that the general encephalic functions are more thoroughly aroused and vivid in the afternoon, and that the temperature of the day and of apartments is commonly warmer. Under the conditions named as incidental to the afternoon there must be a considerable increase of the velocity of nervous conduction.

Coincidental with the utterance of the stammerer there is often a sort of consentaneous muscular by-play carried on, more or less apparent; as a patting of the foot, playing with the fingers, or with a button, twisting or pulling at a handkerchief, making facial contortions, etc. Such movements disembarrass the stammerer somewhat. In some instances these irrelevant movements occur when the stammerer is not speaking or reading, and then they resemble chorea very much. They are often incidental to eating or smoking; and also often occur when the patient is at comparative rest.

Causes of Stammering.—Antecedent disease, interfering with the articulation temporarily, may be such a cause. Pertussis may be such a cause. The violent and protracted laryngeal spasm, the spasmodic phonation, conjoined to other extensive movements, which take place independently of, and in spite of, the will, in this disease, are well calculated to mal-educate that portion of the brain which presides automatically over common language function. As before

said, it may well be supposed that ordinary language effort is carried on by an inferior portion of the brain, independently of any particular direction by the higher brain; that is, there is an automatic machinery for common utterance, in which the higher brain is not ordinarily much concerned. Well, in the violent paroxysms of whooping-cough, all the muscles concerned in speaking and more too, are thrown into violent and unco-ordinated action, beyond any manner of control by the will. The disease exists for weeks, and often for months, an abundant time for the automatic brain to become disastrously in the habit of sending an irregular and improper impulse to the muscles concerned in utterance. For reasons that are readily obvious, during, and at the conclusion of whooping-cough, stammering may supervene. Several of the most extravagant cases of stammering we ever saw were sequels of whooping-cough, the person stammering upon every word and between words.

We are of the impression that children recovering from extreme adynamia in acute diseases are somewhat liable to stammer afterward, especially if the adynamia have caused temporary speechlessness, from which the patient has recovered by degrees.

A very large proportion of stammerers are made by imitating other stammerers, either consciously or unconsciously so doing. A person may consciously and, for a time, willfully imitate (mimic) a sufferer from the malady, and in the meantime so mal-educate his language machinery that finally when he attempts to speak aright he finds himself not only quite unable to do so, but a frightful victim of that which he has ridiculed in an innocent and unoffending person. In all such instances as the latter it would be good justice to permit the patient to suffer on for ten or fifteen years before being cured. In those instances, wherein a ridiculing imitator has not acquired the habit, it would be well enough to give him an expiatory term in the penitentiary of about ten years. At least we have ascertained that that is what all innocent sufferers think about it. A large number of stammerers take on their trouble by unconscious and unavoidable imitation; as a child may imitate its parent, its brother, or sister, an intimate schoolmate, and so on. Cases that supervene in this manner are not so inveterate as are those that arise through ridicule or a malicious purpose, for the reason that the direction of the attention is not so intense in acquiring the difficulty.

It is worthy of remark that one member of a family of children may be an inveterate stammerer, all the other children unavoidably and passively imitating him; but it is almost invariably true that the ones who are the imitators will, after keeping up the imitation for a while, cease to be stammerers to any considerable degree. Especially is this the case if the latter be permitted to act as they will, without any fierce interdiction. To fiercely interdict a child from stammering is exceedingly dangerous, as it only infixes what would otherwise prove a passing impediment. We have witnessed the baneful effects of attempting to "break" children from stammering. A child has not much inhibitory and antagonistic brain by which to control its perverse and semi-automatic language ganglia, therefore, make no appeal, but allow the child to outgrow his malady by his increase of cerebral development.

Illustrative examples can be adduced to prove that there is often well-marked hereditary tendency to stammer. Children born of stammering parents usually

stammer with great facility. One case has fallen under our observation, in which no imitation or any other assignable cause could be ascertained excepting heredity. The father was an inveterate stammerer, but the child had no opportunity to imitate him. The malady was not assailed; as it had appeared spontaneously, so it passed away spontaneously, after a comparatively transient duration.

As has before been stated, stammering sometimes has its origin in a traumatic injury that has long since passed away, leaving the individual sincerely convinced of being unable to articulate a certain sound or sounds. One such case has fallen under our notice. Before we had an opportunity to try to effect a cure, the individual passed from under our observation.

Putting aside the subject of causes, there is a phenomenon which at first view seems difficult to explain, but which is really quite intelligible. It is that when the attention of the stammerer is strongly riveted upon his impediment to utterance, his difficulty in articulation is greatly enhanced. We say we believe this is the rule. His intelligent mental attention may be fixed upon a difficult word, and yet he finds himself all the more unable to utter it properly. The cause of this embarrassment is that the commanding super-phonetic impulse is general and not special. The superior ganglionic mass issues a general order again and again to the inferior and simply executive language ganglion (or ganglia), with no other effect than to still further confuse the special impulses of the latter. If, with steady deliberation, the supreme, cerebral centre set about issuing a certain mandate involving the details of how the word is to be articulated, the difficulty vanishes, and the proper enunciation ensues. And, be it remembered, the more powerful the supreme centre the more efficiently will it assume control of the inadequate, but resisting forces below it. From the principle here shown, it may be clearly seen that persons of very high mental organization are infinitely more apt to make a good recovery from stammering than those of inferior capacity. This is also the principle reason that stammering affects children more than it does adults. We think that the affection is persistent in negroes, a class whose general cerebral capacity is weak.

Stammering is not analogous to aphasia, due to cerebral lesion. As evidence of this, the force of the affection fluctuates from mildness to severity, and from severity to mildness; and may be even wholly suspended for a while, reappearing again in full violence. Also, the style of a stammerer's difficulty changes; within a series of years it may be quite protean. This mutability in force and form could not exist were the physical basis, that portion of the brain concerned in language, mutilated.

Treatment of Stammering.—The treatment of stammering, carried out intelligently, should usually be successful. A large number of the cases, if wholly uninterfered with, have a tendency to spontaneous recovery. This is especially true of young children who have acquired the impediment of speech by unconscious imitation. Indeed, the plan of total non-interference should be adopted in treating all young children who stammer. Ridiculing or forbidding the difficulty, or even attempting to benignly educate them out of it, only unfortunately infixes it. The child should be placed in circumstances of absolute freedom of general growth, physically and mentally, and, by such a course, in the vast majority of cases the trouble will gradually disappear. It seems

exceedingly probable that temperature and climate have their influence. A warm climate enhances recovery by increasing the velocity of nervous conduction. The self-confidence of the child should be cultivated. It should be taught to the fullest extent consentaneous motion, as practiced in dancing and calisthenic exercises. It should be taught music, another highly consentaneous exercise. It should be removed from all opportunity to imitate another stammerer. The whole mental nature of the child should be incited to equable activity.

The intelligent adult stammerer should be thoroughly apprised of the nature of his difficulty, both as to general principle and as to detail. He should be thoroughly drilled in elementary articulation, and in all modes of motion requiring consentaneous action. His general culture should be carried on to an extreme extent. Finally the highest nerve centers will get the mastery of those lower ones that are immediately concerned in utterance, and will teach them a right automatic function. To do all this requires a high form of will on the part of the patient.

Those who belong to the more lowly class, intellectually, are difficult to treat. They make very imperfect spontaneous recoveries, for the obvious reason that the higher brain is weak. When special and conscious treatment is applied, the moderate intellect and will of the sufferer only feebly and inefficiently co-operate in the effort at restoration attempted by the intelligent physician. They are benefited by much society among equals.

Intelligent sufferers from stammering should be cured, if possible, as the disastrous modification which the constant embarrassment that the impediment of speech induces, is mortifying and sad, veiling and rendering a naturally exalted intellect quite abject. Especially is the evil effect of stammering seen in the greatest degree in the cases of those who are of high mental endowments, and have, still, not wealth or high station to act for them as powerful collateral adjuvants.

ONE YEAR'S WORK IN LAPAROTOMY.*

By J. H. CARSTENS, M. D., Detroit, Michigan.

PROFESSOR OF OBSTETRICS AND CLINICAL GYNECOLOGY IN THE DETROIT COLLEGE OF MEDICINE, ETC.

TABULATED STATEMENT OF RESULTS.

Operation.	Cases.	Recoveries.
Appendicitis,	1	1
Herniotomies,	2	2
Abdominal hysterectomies,	2	2
Vaginal hysterectomies,	3	2
Extra-uterine pregnancies,	2	2
Pus tubes,	16	15
Ovaritis and salpingitis,	15	15
Ovarian tumors,	4	3
Miscellaneous,	8	7
Total,	53	49

*Abstract of a paper read at the meeting of the Michigan State Medical Society, May 5, 1892.

These fifty-three cases included several most unpromising cases. The mortality has been a fraction more than seven per cent.

As I said last year, these operations were not made for a record, but every case was operated upon which seemed to offer hope, and every patient was given the benefit of an operation, if it were indicated. Some of the most hopeless cases recovered and now enjoy good health.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MARCH 14, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS AND PATIENTS.

DR. LUCY J. UTTER exhibited a fœtus which showed a very firm adhesion between the head and placenta.

DR. G. W. STONER presented a case of successful union of a fractured patella. Union had taken place once but the bone had been fractured again. The union now seems complete, the use of the leg and knee is perfect, and there is no separation, whatever, in the fragments. Splints and flannel bandages were used in the treatment. Patient was under treatment four months.

DISCUSSION OF PAPERS.

DR. R. W. GILLMAN read a paper entitled "Trachoma," and also presented two successful cases of trachoma.

DR. L. E. MAIRE: DR. GILLMAN must be congratulated on his paper and the case he has presented. Electricity sometimes acts well in these cases.

DR. DON. M. CAMPBELL: Details of treatment are very important. It is not so much what we use as it is the thoroughness with which we use it.

DR. J. FLINTERMAN: It is a peculiar thing that we have no very severe epidemics of this disease in this country. It is dependent for its spread upon a want of proper cleanliness. It is a severe disease and often causes blindness. It would be a good subject for ætiological investigation.

DR. R. W. GILLMAN: I would like to emphasize the use of acetate of lead. I do not use nitrate of silver now. Cupric sulphate ointment, three grains to the ounce, is often of value for the patient to use himself. DR. LINDSAY JOHNSON, of London, has used electrolysis but his cases so treated show great reaction and a large amount of cicatricial tissue formation with entropion.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, MARCH 28, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

REPORTS OF CASES.

DR. MANTON reported a case of retained placenta. I saw this patient, he said, with DR. BRODIE. She is the mother of eleven children. Child had been deliv-

ered about two hours. The placenta was completely adherent. In the last seven cases the placenta had been adherent. The adhesions were very strong and complete and hard to break up. We succeeded in removing the placenta intact.

DR. MCGRAW: What is the pathology of these cases?

DR. E. W. JENKS: The pathology of the placenta is very obscure. Many placentæ are retained when they are said to be adherent. In cases of fungosities which have been curetted and treated, the placenta in subsequent pregnancies is often adherent. In one such case that I remember, the patient had never been pregnant, but almost immediately after curetting her fungosities, became pregnant, was safely delivered at full term but placenta was found completely adherent. It was safely removed with difficulty but the patient being very weak succumbed to a subsequent attack of puerperal septicæmia. It has always seemed to me that the curretting of the uterine walls had something to do with the adherent placenta.

DR. B. P. BRODIE: The patient whose case DR. MANTON has reported was attended seven years ago by a midwife. At that time the placenta was somewhat adherent. Endometritis followed and the patient nearly died. One reason I believe, of the complete adherence was, that as soon as one placenta was removed another one was formed and the bands gradually became stronger and stronger.

DR. T. A. MCGRAW reported a case of intestinal obstruction, caused by the patient eating enormous quantities of popcorn. After eating the corn the patient was seized with great pain about the navel. There was tenderness on pressure, complete stoppage of the bowels. No bloating and no fever. In two or three days she began to vomit fæcal matter. I was called and found the patient vomiting fæcal matter but soon after my arrival she began to have a very copious discharge from the bowels. By the next morning she was perfectly comfortable. The obstruction seems to have been caused entirely by the large accumulations of undigested food. This case presents a point of great interest as to when to operate in cases of intestinal obstruction.

DR. HOLMES, of Chatham: Few cases perplex one more than these cases of intestinal obstruction. There are some cases where it is wrong to operate, even when the vomiting is fæcal, as in the following instance: I was called suddenly to see a lady suffering from acute obstruction of the bowels. After a fair trial of purgatives it was decided to operate, but to give her one more chance. I ordered very copious injections of sulphate of magnesia. This procedure brought on large and satisfactory evacuations and the patient made a perfect recovery.

DR. MANTON: I call to mind a case in which we had decided to operate to relieve an hysteria by the removal of diseased ovaries. The patient was being prepared for the operation but was allowed to eat a large quantity of canned baked beans. Fæcal vomiting occurred and four ounces of sulphate of magnesia were given by enema. She made a good recovery.

DR. DONALD MACLEAN reported a case of multiple fracture of the lower jaw. The fragments had been wired but there was non-union and necrosis took place. Upon examination it was found necessary to remove the ramus on one side. It seemed an heroic procedure but it was the only thing to do under the circumstances.

DR. H. O. WALKER reported a case of railway injury resulting in fracture of

the malar bone and an injury to the knee-joint. The patient limped around for some weeks and when he came under my observation presented a good deal of swelling of the joint and a temperature of 104½ in the morning and 106½ in the afternoon. The knee-joint was opened and thoroughly drained. The patient made a good recovery.

DR. H. W. LONGYEAR here introduced DR. JOSEPH PRICE, of Philadelphia, who read a paper entitled "Pelvic Troubles in Women."

DR. LONGYEAR exhibited two pathological specimens: (1) Of ovaries removed; (2) Uterus removed for carcinoma.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, APRIL 4, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS AND SPECIMENS.

DR. A. W. IMRIE: This patient has had intercostal neuralgia for several weeks and two days after coming under my observation this beautiful herpes zoster showed itself. He is taking phosphate of zinz, one-sixth of a grain every two hours, and locally is applying ichthyol and collodion.

DR. DON. M. CAMPBELL: I have found iodide of arsenic good in these affections and in similar troubles about the eye. Locally, oleate of cocaine is a good application. Perhaps the new preparation of stearate of zinc with cocaine may find a use here.

DR. F. W. ROBBINS: The books in treating of this affection would lead us to suppose that this was a very grave affection and the prognosis bad, but in my experience these cases have all terminated successfully. There cannot be a complete destruction of the nerves underlying these structures.

DR. A. W. IMRIE: No actual disintegration takes place in these nerves. There is inflammatory action followed by exudation which is finally absorbed and the nerve resumes its function. Disintegration takes place in the tissue overlying the ends of the nerves.

DR. TAPPEY: One interesting point is the pain which precedes the appearance of the vesicles.

DR. J. H. CARSTENS: There is a superstition that if this eruption encircles the body the patient will die, but this is false as even these cases do recover. Astringents used to be the proper treatment.

DR. ALONZO BRYAN: Is this a disease of a self-limited nature? Is it a malarial affection?

DR. A. W. IMRIE: A person who is once attacked usually does not suffer again. Malaria is still looked upon as one of the causes.

DR. J. H. CARSTENS presented the following pathological specimens: (1) A very large multilocular cyst showing many hundreds of cysts. A great many adhesions were encountered and the patient was in great danger of dying from the enormous amount of transudation. She finally made a good recovery. (2) A specimen at first supposed to be an ovarian tumor was finally found to have a renal origin. It is probably a melanotic sarcoma. The other kidney was functionally enlarged.

DISCUSSION OF PAPERS.

DR. ALONZO BRYAN read a paper entitled "Stammering." (See page 251.)

DR. C. W. HITCHCOCK: I have been brought personally into contact with stammerers. It would seem that the vigorous bringing up which children get in some districts—having first, last and always impressed upon them the precept, children are to be seen and not heard—is responsible for destroying their confidence and producing stammerers. Many plans of treatment have been recommended, but the one which enjoins upon a person the speaking only during an exhalation seems the best. Any thing which will excite the nervous excitability of a stammerer will make his affections much more noticeable. I believe that when a child begins to stammer he should be vigorously checked and not allowed to form the habit.

DR. ALONZO BRYAN: The incipient cases should be treated vigorously, but if the habit is once well established no notice should be taken of it.

DR. J. L. IRWIN: Are stuttering and stammering considered one and the same affection?

DR. ALONZO BRYAN: I believe they are.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE MICHIGAN STATE MEDICAL SOCIETY.

THE annual meeting of the Michigan state medical society, which took place at Flint, May 5 and 6, must have been gratifying to all friends of the society. Notwithstanding certain unavoidable drawbacks, such as inadequate hotel accommodations and exceptionally inclement weather, the attendance was large and enthusiastic. Throughout all the proceedings a disposition was manifested to subordinate all minor issues to the scientific purposes of the gathering; while perhaps no better illustration could have been furnished of the inherent vitality of the society than the alacrity with which in a few moments of organized effort, the members extinguished a load of indebtedness which had hung over the society for years.

The sectional programmes, the true index of the society's progress, were for the most part filled with interesting and instructive papers, and these in turn evoked animated discussions. A contrast of the last programme with those of former years indicates the prevalence of a distinctly higher tone in that of this year. Personal records obtrude less and less upon the attention, and it will not be long before papers bearing such titles as "A Year's Work in Iridectomy," or "One Hundred and Seven Cases of Laparotomy in One Hundred and Eight Days," will constitute such flagrant offences against good taste, that none will dare submit them. The proper place for operators to proclaim their personal records, in any particular operation, is in medical journals, and not to a gathering whose coming together is strictly for purposes of mutual enlightenment. One instructive case, well presented, its teachings carefully deduced and its lessons correctly applied, will do more in the way of edification than the vain glorious publication of ten thousand records.

The scientific work of the society received valuable aid this year from distinguished strangers. Dr. N. S. Davis, of Chicago, read a paper characterized by all that veteran's vigor and directness, and the paper of Dr. J. F. W. Ross, of Toronto, was a thoughtful and practical contribution to the subject of which it treated.

The society this year gracefully and unanimously elected as its president, Dr. C. J. Lundy, whose untimely death will deprive the society of one who would have proved a capable and competent custodian of its interests.

THE CONDUCT OF THE DETROIT BOARD OF HEALTH IN DEALING WITH CONTAGIOUS DISEASE.

THE recent unusual prevalence of scarlatina in Detroit has called attention to the administration of the local health department, and to the methods of disinfection and isolation it employs for controlling the spread of infectious diseases.

That the methods of isolation and disinfection carried out in Detroit are not satisfactory to the state board of health, was made very plain at the meeting of the board, recently convened to investigate the administration of the health department. This investigation brought prominently into view the laxity which prevails in carrying out preventive measures against scarlatina and diphtheria, a laxity long apparent to those familiar with the methods of the health department.

No fault can be found with the energetic measures the health officer takes when small-pox or any other rare infectious disease appears in the community. He shows a full appreciation of the gravity of the situation, and adopts prompt and efficient means to control the extension of the disease. By vigorous prophylactic measures small-pox has become a very rare disease in the city. To be sure vaccination plays a very important part in this result, but in any large community there are always enough susceptible subjects to develop a formidable epidemic if other prophylactic measures be neglected. In the absence of an individual protection like vaccination, it is not probable that scarlatina and diphtheria can be controlled as is small-pox; but it is safe to say that if diphtheria and scarlatina received the same attention from the board of health that it bestows on small-pox, the mortality from those diseases would be enormously decreased.

The routine measures taken by the health officer in scarlatina and diphtheria are, to placard the infected house, to present to the householder a tract on the sanitary measures to be adopted in the case, to notify the school superintendent of the case, and, when the case has recovered, to go through a show of disinfection. The placard on the house has a certain deterrent influence upon over-anxious friends, the tract often stimulates the observance of sanitary rules and the notification of the school authorities tends to restrict the spread of the disease in the schools. These measures are good so far as they go, but the perfunctory disinfection is believed to be worse than useless. It gives a false feeling of security, and is a diversion of funds that could be put to much better use. Unless it can be done according to the best sanitary knowledge of the day, and under intelligent supervision, it should be abolished.

It will thus be seen that, with the exception of the useless disinfection, the measures taken by the board for the control of scarlet fever and diphtheria, are purely advisory. With the great power that the state gives to health officers the community has a right to expect more than this from its health department.

At the meeting of the state board referred to, health officer Duffield held that in the city it is impossible to carry out effective isolation on account of the antagonism of the medical profession and the community to rigid police surveillance, crowded habitation and the lack of the necessary appropriations. He thought isolation only possible in a special hospital. Many of the arguments the health officer used to excuse the laxity of the board in its treatment of scarlatina and diphtheria would apply with equal force to the sanitation of small-pox, yet it is believed that he would hardly care to face the storm of indignation that a similar laxity displayed in this disease would arouse in the community. It appears as though the policy of the Detroit board in sanitary questions were to follow, rather than lead, public opinion. We heartily endorse the demand for a hospital, and recognize the practical difficulties to efficient sanitation that are met with in a crowded city. These difficulties cannot be held to excuse the *laissez-faire* policy of the board. With the establishment of a well-organized health-board and a well-paid executive officer, the people and the medical profession expect relief from active participation in sanitary matters and look to them for the proper administration of the sanitary laws, and expect an improvement of sanitary regulations coincident with the advance of sanitary science. Since the organization of the present board no improvements in the sanitation of the ordinary infectious diseases have been made, with the exception of placing a time-limit for the official infectious period of scarlatina. This change was made only at the urgent request of the principal medical society of the city. Had it been the policy of the board gradually to make more stringent the sanitary regulations governing these diseases it is probable that the most approved methods of isolation and disinfection could now be carried out without opposition, and that the morbidity of these diseases would be at the lowest possible point.

Let the mayor see to it that senile impassivity be not the sole qualifications for service on the board of health, and let the health officer put a little more vigor and courage into enforcing its regulations.

EDITORIAL BREVITIES.

CASTRATION AS A CAPITAL PUNISHMENT.

Dr. W. A. Hammond has found time outside his steady occupation of booming mineral waters to contribute to the *Medical Examiner*, a paper which contains a powerful plea on behalf of castration as a form of capital punishment. The arguments on the side of castration resolve themselves into two, the mollifying effect of the operation on the disposition of the criminal himself, and the deprivation of his propagative powers. That castration may transform a dangerous ruffian into a gentle but innocuous creature without parts or passions, may perhaps be true, but if the modern doctrines of heredity be true, it would not prevent the propagation of criminals. The deterrent effect of example might doubtless

be telling, but would this be any equivalent for the diminution of dignity entailed to the state that would inflict a cruel mutilation on its wayward citizens. The state that amputated the hands of its thieves, would not commend itself to mankind, for its humane methods of jurisprudence, and the state that would resort to castration as punishment, would soon find that the methods of the pig-gelder would scarcely exercise an elevating influence upon its ethics. Heredity is the only satisfactory plea for the adoption of this measure, and this plea is outlawed by reason of the direct transmission of criminal propensities being still far from susceptible of indisputable proof.

THE DOOM OF THE HUMAN RACE.

A LEADING astronomer computes the probable duration of life on the globe. According to his calculations, the sun has only about five million years of life to run. "The utmost amount of heat that it would ever have been possible for the sun to have contained would supply its radiation for eighteen million years at the present rate." The sun has, according to this authority, already dissipated four-fifths of its energy, so that it can only hold out for four or five million more years. There is therefore nothing which can help the human race,—its inevitable end approaches.

THE AMERICAN MEDICAL ASSOCIATION.

DETROIT is now ready for her medical visitors. The forthcoming meeting seems likely to be a noteworthy one. The extra time to be devoted to sectional work will make the association take higher rank as a scientific body. The entertainments to be offered the delegates will be of that delightful kind which the hospitable city of the straits alone can furnish. It is expected that every delegate will go away refreshed and invigorated, mentally and bodily.

THE BACILLUS OF MEASLES.

THE bacillus of measles has been discovered by Drs. Canon and Pielicke, of Berlin. An English physician claimed the discovery several years ago. The bacilli were found in fourteen consecutive cases. They stain with eosin and methylin blue. They are said to be totally unlike any previously described organisms. Two important factors in the demonstration of this bacillus, however, have not been carried out—the pure culture and the production of the disease in animals by injection. Until this is done the discovery will only rank as an incomplete one.

THE THYMUS AS AN IMMUNIZING CENTRE.

THE question of immunity is likely to receive considerable elucidation from recent researches. The German pathologists are pursuing the problem, on the antitoxine hypothesis. They maintain that the organism possess certain factors, capable of neutralizing and destroying toxic products in the body. These antitoxic bodies they assume to be in the thymus gland and lymphatics. In order to test this idea a thymus gland was secured from a calf, and to a sterilized extract of this, pure cultures were added. Surprising results followed. Tetanus, cholera and diphtheria bacilli were practically neutralized in the fluid. Mice, which were inoculated with a deadly culture of erysipelas, recoverd very speedily when treated with a thymus-erysipelas culture.

A SURGEON'S FEE.

A DISTINGUISHED Chicago physician, who by patience and industry has acquired unusual dexterity, in a certain operation, was called upon to operate on the child of a rich man, suffering from laryngeal diphtheria. The operation was performed with the operator's unfailing skill, and the child already gasping and exhausted was snatched from the clutches of death. The doctor was the recipient of grateful effusions from the parents. Then the skillful surgeon sent in his bill. He had saved the rich man's son, he had performed a service no money could compensate. The bill is sent for two thousand dollars, a check is returned for four hundred dollars, and this is declined. What value is the child's life held to be? If the surgeon had been a business man and sold fifty thousand dollars worth of real estate, or a lawyer and pleaded a suit, two thousand dollars would have been a small fee. Yet the surgeon could not probably get the law to recognize the justice of his fee.

MEDICAL NEWS.

QUILLS are suggested for use as drainage tubes.

THE measles bacillus makes its debut to the profession.

THE New York post-graduate school is to have a new building.

THE American surgical association meets in Boston, June 1 and 2.

TWENTY-THREE thousand people die annually of typhoid fever in France.

THE Chicago pathological society has a lady president, Dr. Eliza H. Root.

SMALL-POX is raging in Bombay. Twenty-three deaths have occurred in one week.

A SIXTY-DAYS' FAST.—A man in Indiana recently died of voluntary starvation.

FIVE thousand new doctors have been added to the ranks of the profession this spring.

PHYSIOLOGICAL lying is different to pathological lying, says Dr. Bremer, of Saint Louis.

DR. W. LYNN WILSON, of Detroit, has been appointed surgeon at the Champion iron mines near Marquette.

DR. R. H. FITZ has been appointed professor of the theory and practice of medicine in Harvard university.

FORTY-SEVEN million people die every year and require twenty-one square miles of earth-surface for their burial.

A FUNCTION of the appendix vermiformis is stated by an author to be that of a gland. It is not an absorbing organ.

LEPROSY appears to be gaining a foothold in Spain, and the attention of the government has been directed to the subject.

THE cremation society of France wants the bodies of dead soldiers incinerated in times of war. The government has been petitioned to that effect.

OVER five hundred thousand persons are annually arrested for drunkenness in this country. So says the census department.

THE Virginia medical law is unconstitutional. The supreme court rendered this decision in the case of the state medical board *versus* a Boston quack.

THE *Annals of Surgery* is now issued from the university of Pennsylvania press. The contents have been augmented in size and the reading matter is excellent.

THE American medical temperance association will meet in Detroit, June 7. Several important papers in connection with temperance and inebriety will be presented.

IN Aberdeen, Scotland, tests are shortly to be made on cattle killed by electricity, to ascertain if the currents have any detrimental effect on the quality of the meat.

A NEW CURE FOR EPILEPSY.—An epileptic boy underwent the Pasteur treatment for hydrophobia at the Chicago institute. He has had no epileptic attack since.

A CHICAGO physician was seen by a policeman to enter a house carrying his surgical bag. He was arrested by the brilliant officer of the law for peddling without a license.

IN France "affairs of honor" are the cause of about three hundred duels annually. They are mostly farces, only eleven deaths having occurred from this cause in the past three years.

THE association of medical colleges will meet in the Detroit college of medicine, Wednesday, June 8, at 3 P. M. Papers on subjects connected with medical education will be read and discussed.

THE latest thing in spittoons for consumptives is a pocket arrangement, made of cardboard, in the shape of a cigar-case. The cost of it is only about three and one-half cents, and it is intended to be burned when full.

THE Wills eye hospital of Philadelphia treated in the year 1891 twelve thousand two hundred and eighty dispensary patients. It is to be hoped they were all deserving poor. The annual report testifies that they were.

A MONUMENT TO S. D. GROSS.—At the last meeting of the American surgical association a committee was appointed to erect a monument in Washington in honor of the memory of America's distinguished surgeon, S. D. Gross.

AMONG the delegates elected to attend the republican national convention at Minneapolis is William Butner, of North Carolina. He is a son of Chang, one of the Siamese twins, whose strange deformity gave them a world-wide reputation.

DR. EDWARD EVERETT HALE prescribes the following to keep a person looking young at seventy: First, never do anything yourself which you can get another to do for you; second, never trouble yourself as to who will get the credit for what is done; third, never work after 3 o'clock in the afternoon; fourth, sleep ten hours out of every twenty-four.

DR. WILLIAM T. MERCHANT, a colored practitioner in West Virginia, has been refused admission to the New York post-graduate medical school and hospital, and Colonel Robert G. Ingersoll has been engaged by the applicant to test the matter in the courts.

DR. PAUL GARNIER, the examining medical expert, says that in eighteen years, lunacy has increased in Paris thirty per cent. "This increase is due to the fact that two morbid types are spreading to an alarming extent—general paralysis and alcoholic insanity. The latter is twice as prevalent as it was fifteen years ago."

THE TURF AND THE HOSPITAL.—The Paris hospitals' fund is this year in receipt of one hundred and sixty thousand dollars from the tax on betting imposed in France on the public establishments which carry on "turf transactions." Of this sum one hundred and forty thousand dollars is applied to the construction of a new consumption hospital, and twenty thousand dollars for the service of revaccination.

ELECTROCUTION.—Dr. Carlos Macdonald has made a report on the seven cases of electrocution in the state of New York. He records the gross and microscopical changes ensuing in the tissues after the application of a lithal current, and while clearly recognizing the bad effects of the current, concludes by saying that electricity "is the surest, quickest, most efficient, and least painful method of inflicting the death penalty that has yet been devised."

PROFESSOR GUSTAV JAEGER, of the famous "Apostle of Wool," is a prophet who enjoys honor in his own family. The professor is now in his sixtieth year, and has just presided at the marriage of his daughter. The lady is a zealot for the doctrines of her father on normal clothing, and appeared at the altar clothed from head to foot in a bridal dress invented by the professor. Even her bridal veil was made of wool of extraordinary lightness and delicacy.

MICHIGAN STATE MEDICAL SOCIETY.—The annual meeting was held in Flint, May 5 and 6. The following were elected to hold office during the ensuing year: President, Dr. C. J. Lundy; treasurer, W. G. Henry; secretary, C. W. Hitchcock. Chairman section of surgery, S. C. Graves; secretary, F. W. Mann; orator, E. T. Tappey. Chairman section of medicine, G. V. Voorhees; secretary, J. B. Bradley; orator, H. P. Osborn. Chairman section of gynecology, Dr. H. McColl; secretary, A. W. Imrie; orator, D. W. Wade. Place of next meeting, Muskegon.

A CHANCE FOR PRIZE WINNERS.—Dr. George E. Gould, of Philadelphia, offers a prize of one hundred dollars for the best essay, which will historically and actually expose the pretensions of modern homœopathic practice. The essay should not contain over fifteen thousand words, and in literary style should be simple and forcible, and adapted to the commonest lay understanding. Papers, type-written, without the author's name, should be accompanied by a sealed envelope giving the author's name and *nom-de-plume*, and sent to Dr. Gould before January 1, 1893. The essays will be given to a competent committee, and when their decision is reached the sealed letters of the authors will be opened and the prize sent to the winner. The essay will then be cheaply and well printed in large quantities and supplied physicians at the cost of printing.

A REMARKABLE EXHIBIT.—The museum of the college of surgeons will shortly be enriched with a unique surgical exhibit. Sir Henry Thompson will show the specimens resulting from one thousand operations for the removal of calculi and foreign bodies from the bladder. The clinical notes in regard to each specimen accompany the gift.

TUBERCULIN.—Two German physicians have just made the discovery that tuberculin is good for tuberculosis. They say "no other method of treatment of bacillary phthisis, not excluding the climatic and that by creosote, can show such good results as Koch's method. Certain cases of tuberculosis first treated by tuberculin improve later on with creosote."

THE association of military surgeons of the national guard of the United States elected the following officers at its recent meeting in Saint Louis: President, General Nicholas Senn, of Chicago; first vice-president, Major Henry, of New York; second vice-president, Lieutenant-Colonel Woodward, of Michigan; secretary, Lieutenant-Colonel E. Chancellor, of Saint Louis; corresponding secretary, Lieutenant Ralph Chandler, of Milwaukee; treasurer, Colonel Francis J. Crane, of Denver. The next meeting will be held in Washington City in May, 1893.

A BORE-BELL.—A Cincinnati physician has a secret office-bell, so says the *Annals of Hygiene*, which he calls a "bore-bell," and he says it is a great thing. When he is tackled by a bore, or when his lady visitors insist upon giving him the history of all their relatives and their ills, the doctor's foot suddenly touches a spring, which rings the "bore-bell," and in rushes a messenger with an important message or telegram. The visitor's tedious tale is interrupted, and she or he leaves the office because the doctor is so busy, you know. The same message or telegram can be used a great many times, and the doctor's callers never suspect anything.

A BUREAU OF SERVICE AND INFORMATION FOR PHYSICIANS AT THE COLUMBIAN EXPOSITION.—Chas. Truax, Greene & Company, an enterprising physicians' supply house of Chicago, announce that during the Columbian exposition they will establish and maintain a bureau of service and information for medical men. Provision will be made for registration, the reception of mail-matter and telegrams, the transaction of banking, and information will be furnished as to hotels and boarding-houses and other matters of interest and importance to visitors. A cloak-room, a reading-room, a reception-room, and other conveniences will also be provided.

MEDICAL MEETINGS IN JUNE.—Ontario medical association, Toronto, June 1; Rhode Island medical society, Providence, June 2; Oregon state medical society, Portland, June 2; Arkansas state medical society, Little Rock, June 2; Massachusetts medical society, June 7; Maine medical association, June 8; South Dakota state medical association, Salem, June 8; Delaware medical society, Dover, June 14; Indian Territory medical association, Vinita, June 14; Minnesota state medical society, Saint Paul, June 15; New Hampshire medical society, Concord, June 20; American association of andrology and syphilology, Richfield Springs, New York, June 20; Colorado state medical society, Denver, June 21; New Jersey medical society, Atlantic City, June 28.

A MEDICAL CLUB.—It is proposed to establish a club for social purposes, restricted in its membership to members in good standing in the *regular profession* of medicine in Philadelphia. A modest club-house is to be secured in a central location, to be fitted up with chess-tables, billiard-tables, etc., where meetings can be held, committees have accommodations, and members may congregate for social intercourse. A reading-room is to be opened where may be kept on file the principal medical journals, the literary magazines and journals of the day. It is contemplated to have occasional (monthly or bi-monthly) dinners, to which non-members of eminence may be invited. The fees and dues are to be moderate, ten dollars initiation at present, and annual dues of ten dollars.

SEVERAL cities in Kentucky are determined upon suppressing empiricism, and have passed an ordinance to the effect "that it shall be unlawful for any traveling or itinerant doctor to practice medicine in any of its branches within the limits of this city; to open an office for such purpose, or to announce to the public in any other way an intention to practice medicine, shall be an offense within the meaning of this ordinance; provided, that nothing in this ordinance shall be so construed as to prohibit any reputable physician or surgeon from any other place being called to see a particular case or family, or to do a particular surgical operation in said city." A violation of this ordinance imposes a fine of not less than fifty dollars nor more than one hundred dollars for each day's practice.

THE LATE DR. C. J. LUNDY.—The profession will learn with sorrow of the death of Dr. C. J. Lundy, which occurred at his residence in Detroit, on Tuesday, May 24. The deceased had been suffering for some time, and only recently had returned from the south, where he had been sojourning for his health. The cause of death was appendicitis. An operation was undertaken for the relief of the trouble, but the patient's strength, already broken by his long sickness, failed him. Dr. Lundy saw many of his friends for the last time, when, at the recent meeting of the state medical society, he was proudly and unanimously elected its president. The profession, in his death, loses an able and accomplished member. Charles J. Lundy was, at the time of his death, forty-six years of age. He received his degree from the university of Michigan in 1872. He went to Bellevue medical college in 1873 and graduated from that institution in 1875. He then devoted special study to ophthalmology and returned to Detroit in 1878, where he has since enjoyed a large and lucrative practice. He was professor of ophthalmology in the Detroit college of medicine. He has filled many important medical positions, having been president of the Detroit medical and library association, and, at the time of his death, president of the state medical society.

AMERICAN ACADEMY OF MEDICINE.—The following topics are promised for discussion at the seventeenth annual meeting of the American academy of medicine at the Cadillac hotel, Detroit, Michigan, on June 4, and Monday, June 6, 1892: (1) "Essentials and Non-Essentials in Medical Education," the address of the retiring president, Dr. P. S. Connor, of Cincinnati. (2) "The

Value of the General Preparatory Training Afforded by the College as Compared with the Special Preparatory Work Suggested by the Medical School in the Preliminary Education of the Physician," a paper by Dr. T. F. Moses, of Urbana, Ohio. (3) "Does a Classical Course Enable a Student to Shorten the Period of Professional Study," a paper by Dr. V. C. Vaughan, of Ann Arbor, Michigan. (4) "The Value of a Collegiate Degree as an Evidence of Fitness for the Study of Medicine," a paper by Dr. L. H. Menter, of Chicago. (5) "The Value of Academical Training Preparatory to the Study of Medicine," a symposium by Drs. H. B. Allyn, of Philadelphia, W. D. Bidwell, of Washington, and Elbert Wing, of Chicago. (6) "The Newer Medical Education in the United States," a symposium by Drs. W. J. Herdman, of Ann Arbor, Charles Jewett, of Brooklyn, and Elbert Wing, of Chicago. (7) A paper on "Some Phase of the State Supervision of the Practice of Medicine," by Perry H. Millard, of Saint Paul. Some other papers are partially promised and the usual reports may be expected from the committees. Members of the profession are cordially invited to be present at the sessions of the academy.

RECENT PUBLICATIONS.

REVIEWS.

LECTURES ON TUMORS.*

DR. HAMILTON'S "Lectures on Tumors" have passed into a second edition, which is sufficient testimony in these days of the interest his literary effort has aroused. The lectures appear to be concise, comprehensive, and fairly reliable descriptions of the etiology and pathology of neoplastic formations.

* By John B. Hamilton, M. D., professor of principle of surgery and clinical surgery, Rush medical college. Second edition. Cloth, 50 cents; paper, 25 cents. George S. Davis, Detroit.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX.*

THE tenth appearance of the "International Medical Annual," is signalized by increased bulk and increased value. The annual is now a substantial volume of nearly seven hundred pages. Among the new features will be noticed the excellent colored plates. The chapter on "Spinal Surgery," by Mr. Thorburn, and the article on "Photography in Clinical Medicine," are so modern in spirit and interest, that they will repay any reader the price paid for the book.

It is suggested that the annual should appear in two smaller volumes every six months. As this would bring the profession more rapidly *en rapport* with the spirit of progressive medicine, we have no doubt the subscribers to the annual will readily endorse the scheme.

*A work of reference for medical practitioners. Cloth. Six hundred and forty-four pages. Price, $2.75. E. B. Treat, New York.

THE USES OF WATER IN MODERN MEDICINE.*

A VALUABLE and comprehensive manual of hydrotherapy is provided in Dr. Baruch's little book. That the American profession is in need of information on the proper method of applying water in disease is evident by the fact that there is no work in the English language upon the subject, the only treatise on the subject which is untainted by quackery being the treatise of Winternitz in "Ziemssen's Hand-book of Therapeutics." The present manual will furnish an amount of information upon the subject of hydrotherapy, which will be accepted with gratitude by those investigating the matter.

* By Simon Baruch, M. D. Volume I. Physicians' leisure library. Cloth, 50 cents; paper, 25 cents. George S. Davis, Detroit.

DISEASES OF THE EYE.*

THE latest manual of the diseases of the eye is a handsome royal octavo volume of over six hundred pages, printed on excellent paper and illustrated with admirable wood-cuts and chromo-lithographs.

The author has given special care to the method of examining eyes, and the symptoms, diagnosis and treatment of ocular diseases. This gives the work a flavor which is decidedly clinical. Dr. James Wallace has contributed the chapter on physiological optics, and deals with the important subject of accommodation and convergence. Dr. Edward Jackson contributes a section on retinoscopy, which is an excellent and practical description of this method of determining refractive error.

Students and practitioners studying ophthalmology, and desiring a modern manual, will find their requirements amply fulfilled in the present volume.

* By G. E. de Schweinitz, M. D., professor of diseases of the eye, Philadelphia polyclinic; ophthalmic surgeon to children's hospital and to the Philadelphia hospital, etc. Illustrated by two hundred wood-cuts and two chromo-lithographic plates. Price: cloth, $4.00 net; sheep, $5.00 net. W. B. Saunders, Philadelphia.

TREATISE ON GYNECOLOGY, MEDICAL AND SURGICAL.*

THE second part of Pozzi's work, now before us, more than sustains the good opinion expressed in the review of the first volume. In the present volume three chapters are devoted to inflammatory conditions of the uterine adnexa; five chapters deal with neoplasms of these organs and the ligaments; three deal with tuberculosis, intra- and extra-peritoneal hæmatocele and ectopic pregnancy; four with diseases of the vagina; seven with affections of the vulva; three with malformation of the genital organs; and two with the diseases of the urinary tract, rectum, and pelvis. The whole field of generic disorders is thus covered in the two volumes, which form a thorough and comprehensive treatise on the subject,—a treatise which no general practitioner, who desires to keep informed in this department of medicine and surgery, can afford to have absent from his book-shelves. The illustrations are excellent and numerous, many of them new,—many borrowed from works and current literature not easily accessible. We are glad to note that the American editor has reproduced several of our distin-

guished countryman, Joseph Price's, excellent colored plates of tubal disease; besides which there are lithographs of other interesting and important conditions. The flap-splitting operation of Tait, and Sanger is fully described and illustrated in this volume, and the minor affections of the external parts particularly well dealt with.

On the whole, we believe that the translator's assertion that this treatise is "the best work on gynecology which has appeared for many years in any language," is exceedingly well founded. W. P. M.

* By S. Pozzi, M. D., professor Agrege a la faculte de medecine; chirurgien de l'hospital Lourcine-Pascal, Paris etc. Translated from the French by Brooks H. Wells, M. D., New York. Wm. Wood & Company. 1892. Volume II. Five hundred and eighty-three pages.

REFERENCES.

BOOKS AND PAMPHLETS.

"Gastrostomy." By Nicholas Senn, M. D., Ph. D., Chicago. Reprinted from the *Chicago Medical Record.*

"On the Use of Creosote in the Treatment of Pulmonary Phthisis." By Beverly Robinson, M. D. Reprinted from the *Medical Record.*

"The Second Year's Work in Diseases of the Rectum at the New York Post-Graduate Hospital." By Chas. B. Kelsey, M. D. Reprinted from the *New York Medical Journal.*

"Ideals of Medical Education." The address in medicine, Yale university, 1891. By John S. Billings, M. D., LL. D. Reprinted from the *New Englander and Yale Review.*

"Ideality of Medical Science." The evil events of the profession and an available device for its reformation. By Maurice J. Burstein, A. M., M. D., New York. Reprinted from the *Doctors' Weekly.*

MEDICAL PROGRESS.

MEDICINE.

QUININE *VERSUS* FEVER.

QUININE has ever been rightly considered as almost a specific in the treatment of malarial troubles, although the profession have been, as yet, unable to satisfactorily account for its pharmacodynamic properties. Not long since quinine still was considered as a nervine, influencing in a favorable but unknown manner the pathological nervous disturbances obtaining in malarial affections. Dr. Karl Binz, professor of therapeutics in Bonn (Germany), has since 1867 ventured another pharmacodynamic theory on the action of quinine. This, however, met with but little attention, until recently brought again into prominence by Laveran's discovery that malarial troubles are traceable to the presence, in

the blood, of *plasmodium malariæ*, a species of micro-organism classified with the protozoa.

Binz demonstrated, in 1867, that neutral or slightly basic muriate of quinine possessed a poisonous influence over the protoplasmic elements of decaying vegetable matter, and moreover showed a decided capacity for checking most fermentative and putrefactive processes. He also pointed out how quinine proves to be a regular poison for the amœbæ living in sweet water. If to a specimen where these micro-organisms are very lively we add a weak solution of neutral or slightly basic muriate of quinine we notice an immediate cessation of movement, and soon observe these organisms to undergo putrefactive changes. Even with a high dilution, say one to thirty thousand, these phenomena will obtain within a few hours. Binz came at that time to the following conclusion: That quinine acted not on the nervous system, but influenced malarial fever and its many symptoms, including periodicity, by influencing and destroying the cause of the disease, which probably was nothing more than a micro-organism.

These theoretical views were finally corroborated after nearly twenty-five years. A. Laveran, who discovered the malaria plasmodium—inside of the red blood corpuscles, has also demonstrated how this microbe will, after exhibition of quinine, disappear from the blood of malarial patients, and be destroyed by mediate influence of the drug. If under the microscope we add to one drop of blood, from a patient affected with malaria, one drop of a solution of sulphate or muriate of quinine, we shall immediately witness the death of the micro-organisms. Hence the exhibition of this drug in malarial affections will rest on scientific footing. Nothing is more satisfactory to the ever "causation-hunting" human mind than to stamp out disease by the immediate destruction of its cause. This is really the triumph of medicine.—*Wissenschaftliche Monatsblatter* for February, 1892. J. V. B.

PHYSIOLOGICAL IMPORTANCE OF THE THYROID GLAND.

Dr. Raimondo Canizzaro, concluding from numerous experiments which he carried out in the pathological institute of Catania (Italy), and a report of which has been published in the *Deutsche Medicinische Wochenschrift*, for March 3, 1892, gives the following statement of conclusions:

(1) The thyroid gland produces a substance the presence of which in the system is necessary for the physiological action of the nervous system.

(2) Said substance must be present in the blood of all animals, and is found to be deficient only in the blood of animals dying after extirpation of the thyroid.

(3) Besides the thyroid, animals do certainly possess other organs which fulfill the same physiological mission.

(4) The special product of the thyroid seems to be present not alone in the blood, but also—in vastly smaller amount—in the gray substance of the brain.

(5) Bromide of potassium seems to have on the ganglionic cells an action seemingly corresponding to that effected by the active principle generated in the thyroid.

The above conclusions correspond altogether with the various phenomena presented by the animals—as well during the first month after operation as

during the following months—until a complete and permanent cure has obtained.

The numerous cases observed by Canizzaro all come within five symptomatic classes:

(1) Motor disturbances (paralysis, paresis, cramps, convulsions).

(2) General or specific sensory troubles.

(3) Trophic disturbances varying from the almost imperceptible to the most typical.

(4) Vaso-motor troubles (thermogenic disturbances).

(5) Psychic phenomena ranging from simple mental depression to some special forms of dementia.

Canizzaro believes all these phenomena to result from functional disturbance of the ganglionic elements, originating in absence or deficiency of the thyroid secretion. J. V. B.

GLYCERINE IN THE TREATMENT OF HEPATIC COLIC.

At a regular meeting of the Paris academie de medicine held on March 8, 1892, Dr. Ferrand, speaking on this subject, submitted the following conclusions:

(1) Glycerine when entering the stomach is taken up unchanged by the lymphatic channels, and more especially by those connecting the stomach with the lower aspect of the liver and the gall-bladder; the drug may even be detected in the supra-hepatic veins.

(2) Glycerine is an effective cholagogue and a valuable aid in the treatment of hepatic colic.

(3) Rather massive doses (twenty to thirty grammes, one to two fluid ounces) will end the present attack.

(4) Small doses (five to fifteen grammes, three drachms to the ounce) of glycerine taken every day in a little alkaline water will prevent the recurrence of the trouble.

(5) Although not a lithontriptic, glycerine proves to be *the* remedy for the treatment of cholelithiasis.—*Union Medicale.* J. V. B.

ANTIPYRINE FOR THE RELIEF OF HEADACHES.

Since antipyrine was first brought prominently before the medical profession several years ago, ample time has been afforded in which the claims made for this remedy can be investigated and either substantiated or disproved.

As an antipyretic the drug is certainly effective, and as an analgesic and hypnotic it is valuable to a certain extent. The varied affections for which antipyrine can be employed with efficacy are so numerous that the subject would be too voluminous for a single article. I therefore propose to confine what I have to say to the effects of antipyrine on certain forms of headache.

In migraine, antipyrine may or may not be a suitable remedy. It is well known that attacks of migraine, in some instances, are characterized by pallor and coldness of the skin on the affected side, while in others, flushing of the face, increased temperature of the skin, and dilatation of the temporal artery are prominent symptoms. Whether this condition of vaso-motor spasm on the one hand, and vaso-motor paralysis on the other, are the causes or only concomitant

symptoms of the affection has not yet been definitely determined, but it seems to me that those remedies are most effective which counteract the existing abnormal vaso-motor condition. Thus, in migraine accompanied by vaso-motor spasm, such remedies as glonoin, amyl, alcohol, or quinine, frequently relieve the pain and abort or arrest the attack within a very brief period of time. One of the actions of all of these medicines is to dilate the cerebral blood-vessels. Again, such remedies as the bromides or other drugs which contract the cerebral blood-vessels in a similar manner are either ineffective in relieving the pain or else decidedly aggravate it. Antipyrine, in my opinion, in addition to its other properties, has the power of diminishing the intra-cranial circulation. Perhaps it is to this effect that its hypnotic action is due.

At all events, I have seen many cases of migraine, in which angio-spasm was well marked, either entirely uninfluenced by antipyrine or else made very much worse by it. It seems to me that this effect is probably induced by intensifying the cerebral anæmia which probably exists simultaneously with the anæmic condition of the skin of the face on the affected side.

Quite different, however, is the action of antipyrine on cases of migraine accompanied by vaso-motor dilatation. Previous to the advent of antipyrine we possessed no remedy which could relieve the pain of this form of headache with any degree of celerity, except opium in some one of its many forms. But if antipyrine seems to be contra-indicated in the angio-spastic form of migraine, it certainly appears to exert a most beneficial influence on the angio-paralytic variety. It should be given as soon after the onset of the attack as possible, and the patient should be instructed to keep as quiet as he can. There is little to fear from any depressing cardiac effect from the use of antipyrine in this affection. The action of the heart is usually accelerated and somewhat exaggerated, and therefore a remedy which has a slightly depressing effect is not to be deprecated. If the pain has increased steadily until it becomes very intense before antipyrine is administered, it is very apt to prove either inoperative or else very nearly so. The analgesic property of antipyrine is limited because the quantity given at any one time must be limited. With morphine, the effect of which is mainly analgesic and is only hypnotic after the analgesic effect is secured, it is, in most cases, quite proper to administer it in sufficient quantities to relieve pain no matter how intense the pain may be. But with antipyrine the case is different. The quantity which may properly be given at one time must necessarily be limited, and consequently the analgesic effects must be limited as well. Hence it is always best to give antipyrine as soon after the onset of the attack as possible. It will then be found to be a reliable, effective and perfectly safe remedy, and will give relief in many cases where formerly morphine was employed. Its advantages over morphine for the relief of moderate pain is that it produces no stomachic disturbances, derangements of digestion, or leads to the danger of forming a morbid habit, or constipation, while it is equally effective in relieving pain, leaves little doubt in our minds that morphine should never be used in such cases if antipyrine can be obtained.

In sick headache, properly so-called, in which the headache seems to be reflexly due to the irritation of the digestive tract from the inordinate use of food, alcoholic stimulants, or to both combined; or from the direct effect upon the brain of blood charged with deleterious substances, such as, for instance,

uric acid, which results sometimes from indiscretion in diet, antipyrine is very effective. This is well known to many habitual "diners out" whose much-abused digestive organs refuse to submit to further outrage without vigorous protest, and to those who frequently drink alcoholic beverages to excess. It is not infrequent to find such as these carrying antipyrine powders in their pocket-books so as to have relief close at hand when they require it. The popular knowledge of the efficacy of antipyrine to relieve this form of headache is to be deplored, because with the drug in his possession the individual who formerly was somewhat restrained by the fear of the consequences of a debauch believes he can now indulge in excess with impunity, and, because on account of the relief experienced, without any deleterious effect being perceived the layman believes he can prescribe the drug for himself whenever he pleases and for all forms of headache and neuralgic pains without jeopardizing his health in the least.

By the time sick headache makes its appearance, after indiscretion or excess of diet, the system is usually below par, and the heart after a period of stimulation and forced work is somewhat fatigued. It is better, therefore, before administering antipyrine for the relief of sick headache to examine the condition of the heart, and if it is at all irregular, or inclined to be sluggish, to combine the antipyrine with digitalis or with some other cardiac stimulant, except alcohol. Observing this precaution, antipyrine will be found to be an excellent remedy for typical sick headaches.

In the various forms of neuralgia, either of malarial origin or from other causes, antipyrine is a very serviceable and effective drug. There is no reason to believe that antipyrine has any curative effect such as quinine has and it is therefore useless to give it between the paroxysms of pain, but in arresting the paroxysm itself the rapidity of its action and the thorough relief it affords are often quite remarkable.

Antipyrine undoubtedly owes its analgesic properties to its effects on the sensory cells of the central nervous system, diminishing their irritability without completely abolishing it. Its use, therefore, is to control pain without affecting the morbid condition which gives rise to the pain. Using it for this purpose only and using it with care and discretion it will be found to be one of the most useful drugs in our possession.—Dr. Græme M. Hammond in *Journal of Mental and Nervous Diseases.*

INEBRIETY CURES.

INEBRIETY cures are "boomed" in America on the joint-stock principle with astonishing energy and temporary success. So long as the boom lasts, the secret remedy cures, the main factor being apparently the enthusiasm bred of credulity (or "faith") and association. A number of repentant drinkers come together in an institution where alcohol is withheld, anxious to break their bad habits, assured of cure if they will take the secret remedy, submit to hypodermic injections, and throw all that is left of manhood and hope into the effort to break the chains of the drink-habit. These seem to be the chief elements in the fitful successes which follow the creation of "joint-stock secret-cure establishments" for inebriety in America. The secret of the financial success is, of course, the

affirmation of the peculiar virtues of the secret medicine or hypodermic injection. But the formula is probably of minor importance. It only furnishes the central point of the system; it is the *punctum ignotum*, the starting point suggestive of faith and contributing to mental effort, and the occasion of the ceremonial fetish of each day which keeps hope alive and applies the spur to daily mental resolve. By itself and away from the influence of institution-life and the magic of contagion among a crowd, the medicine or injection is by no means so effectual, although the charm of its secrecy and the tradition of its success help it sometimes to enable the believing and striving slave of alcohol to work out a reformation. Probably hypodermic injections of water would often be as effectual under like circumstances as the injections of strychnine and atropine, and alleged precious metals which are the basis of more than one much-advertised success. Institutions for the curious combination of mental discipline and hypodermic secret injections and joint-stock finance are multiplied in America, and an attempt is now on foot to float a similar institution in this country, subject, of course, to payment for the use of the "secret remedy." We have received from more than one source a preliminary prospectus, setting out figures which do not err on the side of modesty. But with the financial aspect of such an enterprise we have no more to do than with the prices at which other secret remedies have been "placed on the market." Medical men who respect their professional position have long since decided that they will in this country have nothing to do with secret formulæ. The analysis of such remedies generally indicates that there is nothing novel in their composition, and that the main elements in such outbursts of passing success as from time to time attend them are to be found in the high hopes confidently raised, and the tendency which, especially in the psychological state of the inebriate, these hopes have to fulfill themselves; in the strength which association in an institution gives to the many to form new habits and discard old abuses; and in the revived health and mental power which come from withdrawal from the trials, temptations, and degradation of the city life of a victim to drink. Their combination with a secret medication of doubtful value is the factor which will deter the British profession from joining in any way with the ingenious financiers who propose to transplant this marketable "notion" to this side of the Atlantic.—*British Medical Journal.*

MENSTRUAL MADNESS.

In a paper on this subject appearing in the *Jour. de med. et de chir. prat.*, it is stated, according to the *Medical Age:* It is notable that at the time of menstruation most women suffer from unusual phenomena, implicating generally the nervous system. The most common symptom is migraine, which may be regarded as the beginning of a slight cerebral excitation. A change in the ordinary disposition is frequently seen, the person becomes quarrelsome, contradictory, and unsatisfied; an abnormal jealousy may also be observed. Cases of dipsomania, kleptomania, etc., have been observed at this period, and erotomania is not uncommon; in one case a woman in a high state of genital excitement wanted to be taken to a house of prostitution.

The gravest form of complaint is that of homicidal mania, of which some

cases have been known to exist; much more frequently, however, the delirium is generalized; it is a true madness which nearly always manifests itself during the flow of the blood. All the symptoms cease with the catamenia or a short time after, but cases have been known which degenerated into chronic mania. Again, melancholia is observed; this last form is particularly noticeable in young girls at the time of their first periods.

The prognosis in menstrual madness is relatively favorable, but full account must be taken of the predisposition. If that be favorable the cure is more easily obtained than with any other form of mania. Leeches and vesicatories may be of some use, but the chief reliance must be placed in the bromide of potassium, a medicament essentially genital. If the manifestations of the disease be very marked, it is well not to forget that, by the side of opium, morphine, and atropine, the tartar emetic in small doses is very efficacious and is much employed in England, especially to calm excitements of this kind.—*Weekly Medical Review.*

THE THERAPEUTIC VALUE OF ELECTRICITY.

In September, 1891, an electro-therapeutic congress was held at Frankfort, Germany, and another in Philadelphia, Pennsylvania. The proceedings of both these congresses have been published and have received considerable attention. The methods and aims of the two meetings were, however, in singular and instructive contrast. While the Philadelphia congress devoted itself to the publication of new methods, new instruments, successful results, and, in general, to the exploiting of electro-therapeutics, the Frankfort congress took directly the opposite course. The single aim in all the discussions was to find out if electricity did any good whatever; if so, in what classes of cases and by what methods. Throughout the meeting there pervaded a thoroughly critical and scientific spirit, which we trust our American electro-therapeutists will in the future endeavor to emulate.

A perusal of the transactions of the Frankfort congress, and of some German articles published about the same time on the same subject, leads one to the conclusion that electricity comes out fairly well as a therapeutic agent, and that it will hold a good place in the armamentarium of the physician. The "happy therapeutist" who has somewhere imbibed the opinion that "electricity is life," with all the jocund and deep-seated powers which that implies, will feel, perhaps, disappointed over the actual curative effects which have been found to be possessed by the electrical current. But there is enough in it to help him and his patients a great deal, after all.

In paralyses due to injuries or disease of the peripheral nerves, electricity, while not a specific, does good in promoting and hastening cure, or in starting into activity again a stagnant reparative process.

In organic diseases of the spinal cord, electricity seems to have no direct effect upon degenerative or inflammatory process. Yet there are occasional exceptions, and in most cases some indirect benefit results from the stimulation of muscles and peripheral nerves, or by modifying the central circulation.

In organic diseases of the brain, it has never been thought by serious persons that the electrical current could directly modify inflammation or softening. But

the mechanical and psychic effects are often profoundly useful. Wernicke's theory that stimulation of the paralyzed muscles tends to develop new sensory-motor areas, and furnish new centres in place of those injured, is plausible and has some clinical support.

There is a general agreement that electricity has a curative effect on many forms of neuralgia, and a sedative and helpful effect on many kinds of spasmodic troubles. Electricity, however, has been supplanted by the analgesics in the treatment of acute attacks. Great confidence is expressed by the French school in the use of faradism in Basedow's disease; and all agree that in neurasthenic and hysterical conditions electricity is of value. Whether its action is "suggestive," or mechanical, or biological, does not much matter, except as a question of pure science.

The Franklinic electricity has been found to have a specific effect on metabolism, increasing it more than is done by other forms.

The effect of such discussions as were had at the Frankfort congress should be to make the physician more cautious in using electricity, but more confident and intelligent when he does apply it.

It would be a most fortunate thing if some of our numerous medical congresses would take up and study critically others of our apparently well-established remedies. Would cod-liver oil stand the test, or the hypophosphites? And that superiorly wonderful tincture of the chloride of iron, would it really prove better than iron rust? The question might be asked whether invalid humanity would not be better without strychnia, or alcohol, or Fowler's solution.

We trust some day to see the medical profession enter upon a phase of therapeutic regression.—*Medical Record.*

JAUNDICE.

ONE by one the distinctions that apparently separate jaundice into two forms have been dissipated. As long as it was contended that bilirubin, the coloring-matter of the bile, was not formed, but only separated in the liver, or that it could be formed elsewhere, and especially in the blood, the distinction between hematogenous and hepatogenous jaundice could be reasonably maintained. Now, however, that investigation has demonstrated the fact that bilirubin is created by the hepatic parenchyma out of materials brought to the liver by the blood, the distinction becomes invalid and only a hepatogenous form of jaundice can be recognized. It is admitted that hematoidin (which occurs in old blood-extravasations) and bilirubin are identical, but the former is never present in quantities large enough to occasion the manifestations of icterus. The absorption of hematoidin may be followed by increased production of biliary coloring-matter or by discoloration of the urine, but neither nor both of these conditions constitute jaundice.

The hepatogenous character of jaundice dependent upon evident obstruction of the biliary passages is capable of ready explanation. Bile is secreted under blood-pressure so low that but little diminution of the pressure or but little resistance to the discharge of bile is necessary to bring about resorption, the pigment being deposited in the various textures of the body and giving rise to jaundice. The difficulty was encountered in endeavoring to explain the mech-

anism of the jaundice that occurs, for instance, in acute yellow atrophy of the liver, in phosphorus-poisoning, in yellow fever, in so-called Weil's disease, and in other constitutional affections. In these no cause of biliary obstruction was apparent, and, in the absence of other recognizable cause, the jaundice was dubbed hematogenous. It now appears, however, that even in these the jaundice is actually obstructive. By careful experiments carried on with wonderful persistence for a long period of years, Stadelmann (*Der Icterus und seine verschiedene Formen*, etc., Ferd. Enke, Stuttgart, 1891) has succeeded in demonstrating that in many of the conditions in which jaundice exists without apparent obstruction there is really a catarrhal condition of the ultimate biliary radicles, so that the process is one of resorption, and hence hepatogenous.

Under certain conditions, especially such as are attended with disintegration of the blood and hemoglobinemia and hemoglobinuria, it may happen that the biliary coloring-matter is secreted in excess, a state known as polychromia or pleiochromia resulting, in consequence of which jaundice may develop. The mechanism in these cases is, as in the others, really hepatogenous or resorptive. If bile is secreted in excess the condition is known as polycholia. This, however, is not necessarily attended with jaundice.

Some of the symptoms associated with jaundice are dependent upon the absence of bile from the intestine. Among these are the deficient peristalsis and constipation; the fermentative changes in the intestinal contents, which, in consequence, are more than usually offensive in odor and which sometimes occasion diarrhœa; the stools are pale in a degree proportionate to the completeness of the interference with the entrance of bile into the intestine. Other symptoms, like the depression of the temperature, the slowing of the heart, the itching of the skin, are attributable to the presence of the biliary acids in the circulation. In the cases in which more profound and especially cerebral symptoms are present, these may be ascribed to the primary factor in the development of the jaundice, be that infection or intoxication.—*Medical News.*

SURGERY.

ALCOHOLIC INJECTIONS FOR CANCER.

Dr. Schultz, of Buda-Pesth, reports ten cases of uterine cancer in which the disease was arrested by injections of alcohol. The patient is placed in Sims' position, a Sims speculum is introduced, and the meatus urinarius is guarded with wool lest it should be hurt by drops of alcohol falling on it. An instrument about five times the size of a hypodermic syringe, but otherwise similar, is employed. Five cubic centimetres of absolute alcohol are thrown up. The needle of the syringe should be passed about an inch into the cancerous tissues. This causes some pain, which, however, does not last long. The injections may be made daily or every other day, and the vagina should be packed with a strip of iodoform gauze after every injection. After about thirty applications of the syringe the cancerous tissue, in the cases under Dr. Schult'z treatment, almost disappeared, and epithelium grew over the eroded surface of the disease. How long this condition will last, observes Dr. Schultz at the end of one of his clinical reports, the future will show.—*Medical Record.*

INOCULATION OF CANCER.

PROFESSOR DUPLAY reported to the Paris academie des sciences the results of his experiments conducted with the assistance of casin, with a view of ascertaining the possibility of "inoculating cancer." Twenty-two inoculations attempted on rabbits and dogs with human cancerous productions thrown into the subcutaneous connective layer, into the peritoneal cavity or the venous circulation, all proved successful. Every one of these attempts was followed by negative results, as well as inoculations of cancerous productions from dog to dog. Inflammatory nodules consequent upon these inoculations every time underwent retrocession and completely disappeared.—*Deutsche Medicinische Wochenschrift.* J. V. B.

ZINC CHLORIDE IN DISLOCATION OF THE HIP.

AT a regular meeting of the Paris societe de chirurgie, held on December 23, 1891, Professor Lannelongue reported on the "Treatment of Congenital Dislocation of the Hip-Joint by the Use of Chloride of Zinc Injections." The treatment of these dislocations is difficult, and very often baffles the efforts of the surgeon. Jules, Guerin and Pravaz, attempted mechanical extension followed by rapid reduction, and immobilization; Hueter advised resection of the head of the femur. Hoffa introduced a complex operation by which he reduced the length of the pelvi trochanteric muscles, and fastened a flap of periosteum to the articular capsule and the trochanter. The reason why some attempts are unsuccessful is readily found in the abscence of a cotyloid cavity, a defective rim to the acetabulum, and an imperfect femoral head. Anchylosis could not offer any good results on account of the consequent lack of development. By the injection of a chloride of zinc solution around the rim of the acetabulum Professor Lannelongue expected to promote, on account of the consequent osteitis, the formation of a pericotyloid ridge. He twice effected on a child, three years of age, deep injections of the chloride of zinc solution, and since has noticed the formation of a hard lump, a bony crest, very probably due to a process of condensing osteitis, which will oppose further dislocation of the femoral head. No accident has thus far developed from these injections.—*Union Medicale.* J. V. B.

OBSTETRICS.

BARBARIC MIDWIFERY.

DR. J. K. SIMPSON, of Alaska, gives, in a recent number of the *Occidental Medical Times*, a sketch of the obstetric customs of the Alaskan Indians. His observations were made in the south-east of Alaska. When a woman arrives at full term a tent or hut is erected, and a hole dug in the middle and lined with moss. When labor commences the woman goes to the hut and squats over the hole, as in the act of defecation, grasping a pole driven into the ground in front. She is attended by three squaws; one sits behind her, and when a pain comes on clasps her arms firmly about the abdomen, while the other two women press firmly with their shoulders against the knees of the parturient woman. The

child drops into the hole, occasionally breaking a bone or sustaining other injury. The umbilical cord is divided about four inches from the navel by twisting it and pinching with the nails, and is not tied. The squaws maintain their relative positions during the third stage of labor; a binder, consisting of two pieces of cloth or skin quilted together, and strengthened by pieces of bark, is applied, and the woman, if a primipara, remains where she is for ten days, but if a multipara often goes about her work the first or second day; in neither case is she washed for ten days, so that antiseptic widwifery is not followed. In spite of this, puerperal fever appears to be uncommon. The child, after remaining in the hole five or ten minutes, is drawn out, and the midwife dresses the stump of the cord with a foul-smelling mass consisting of the leaves of some herb chewed months before. The child's face is wiped, and it is put unwashed into a bag, stiffened with bark, which covers all but the head. Certain superstitions exist as to the placenta and cord. As a rule the placenta is burnt and the ashes carefully preserved; when the individual dies the ashes of the placenta are placed with those resulting from the cremation of his body in a small burial house. When the stump of the cord becomes detached from the infant's navel it is enclosed in an embroidered buckskin cover, and stitched to the front of the child's clothing, where it remains like a rosette until he is three or four years old. At that age the child goes into the woods and hides it.—*British Medical Journal.*

THERAPEUTICS.

TREATMENT WITH DERMATOL.

DERMATOL, the basic gallate of bismuth, has been experimented with by Dr. Eugene Doernberger. He reports the treatment of forty-three cases in a children's hospital. The oderless, yellow powder itself, a ten per cent. dermatol, with vaseline spread on lint, and ten per cent. dermatol gauze, were used singly or combined. Any mixing with other remedies already known was avoided. Besides the bismuth preparation, only Bruns's cotton, lint, and simple gauze were used.

Fifteen cases of weeping and scabbing eczema were treated with a dressing of dermatol in vaseline. Almost all were quite dry in one or, at the outside, two days. The scabs either fell off or were easily removed. Not only such simple eczema, as is often found on the ears and noses of children, but those more widely spread, both of recent and of long-standing, healed quickly. The remedy was not effectual in preventing the development and spreading of papular eczema.

Two children with general boils were treated. The small boils were punctured and pressed out; then sprinkled with dermatol powder, healing quickly; but the larger ones were healed more rapidly by ordinary iodoform-gauze tampons.

One case of pemphigus in a child three months old, and one of herpes zoster in a larger girl, were quickly cured.

Two large dermal abscesses, one of them on an individual with tuberculosis, healed well and soon, by packing with dermatol gauze, after removing the pus and washing antiseptically. The secretion on the next day was extremely slight,

then nothing, so that only a very small amount of bandaging material was needed. The cavities closed quickly and well. The edges of the wound looked constantly very well. There was no trace of irritation eczema, such as often follows the use of other remedies for children. He had the same result in two cases of abscesses of lymphatic glands.

For injuries, dermal treatment was preferred. A cut on the sole of a foot, which had been neglected for fourteen days, and several shot-wounds of fingers, were successfully treated. In the first case pus was already present. At first dermatol was applied in a small quantity, but this was followed by a more generous use of it, which cured it in a few days. For the shot-wounds also a large quantity was necessary.

This remedy is admirable as a salve, thickly spread upon lint, to be applied to burns. Doernberger saw two cases,—one a burn with fat, the other with hot water. It is useful for burns with fuming nitric acid. The serous secretions, which are otherwise so troublesome, because they so quickly soak through the bandages, were very slight. The formation of new skin occurred with greatest rapidity beneath the layer of dermatol. In seven cases of otitis media, in which dermatol was blown in, the pus formation in the first days after dermatol was ordered was a much smaller one, and ceased entirely from the fourth to the sixth day.

These experiments showed Doernberger that dermatol was certainly of great value for treating moist, impetiginous eczema, and as an exsiccant; that it is odorless, non-toxic, not irritating, and like iodoform, helpful to granulation, but possessing advantages over it. Whether it can also displace iodoform as an antiseptic, even when used in large quantities, must be proved more clearly by further experiments. Its greatest advantage in diseases of children is its harmlessness.—*Therapeutische Monatshefte.—Therapeutic Gazette.*

MEDICAL MELANGE.

THE ELECTRIC DOUCHE.—Dr. W. S. Hedley, believing that the action of electrized water by means of the electric bath is the least painful way of applying the current to the body, uses a movable jet douche, obtaining his electricity from a seventy-four cell Leclanche battery with a milliampere-meter in the circuit. With salt water he could obtain a stronger current. It seems not unreasonable that with combined electric and hydriatric procedures we have a therapeutic agent of considerable power.—*Lancet.*

NOCTURNAL ENURESIS CURED BY EXCISION OF LUSCHKA'S TONSIL.—Koerner reports the cure of nocturnal enuresis in two girls, one nineteen years old, the other three years, following the extirpation of Luschka's tonsil, which in each case was considerably hypertrophied. This cure was immediate and complete. These cases, therefore, illustrate the important part that nasal obstructions may play in the pathogeny of nocturnal enuresis. The coexistence of hypertrophy of Luschka's tonsil and the nocturnal incontinence of urine of childhood (already remarked by Major, Ziem, Bloch, and Schmalz) is, however, so unusual that it is necessary to consider that without the existence of some predisposing weakness of the sphincter vesicæ, adenoid vegetations of the pharynx could not alone excite incontinence.—*American Journal of Medical Sciences.*

A NEW AND RAPID TEST FOR SUGAR.—At a meeting of the Austrian surgical society, Professor Nothnagel showed a handy test for sugar, which had been forwarded to him by Dr. Becker, of Cairo. It is simply a visiting card saturated with a solution of potash, part of which is coated with sulphate of copper, and the urine applied. The card is then laid in the globe of a lamp, when the saccharine urine will color the card brown, and this color will be the deeper the greater the amount of sugar.

HYDATIDIFORM-MOLE PREGNANCY.—Engel (*Centralbl f. Gynak.*) has examined five cases of molar pregnancy which were observed in the course of four thousand labor patients under his observation. These cases occurred in a woman aged twenty-two, a two-para; a second, aged twenty-six, a three-para; a third, aged twenty-eight, a four-para; a fourth, aged thirty-two, a nine-para; and a fifth, aged forty-six, who was the mother of no fewer than twenty children. The fœtus could not be found in any of these cases. The most characteristic symptom was hæmorrhage, which began about the third month and lasted for weeks or even months, in the course of which period the uterus steadily increased in size. At first the blood was very serous and almost colorless. Later old and recent clots came away. Another characteristic train of symptoms consisted in nausea, headaches, pallor, palpitations, and other phenomena, due to internal hæmorrhage. The uterine walls were always thin, the cervix participating in the morbid change. Hence sharp instruments are out of the question. Ergot should be given, the vagina carefully plugged, and ultimately the cervix must be cautiously dilated with compressed sponges, the uterus being emptied by the hand.—*Saint Louis Medical and Surgical Journal.*

A TOY BALLOON IN THE TRACHEA.—The patient, a colored child, eight years old, was seen for the first time, April 22, 1891. It was stated that two hours previous to this time the child had swallowed a toy balloon, that she had had several severe choking spells, but that in the interval her breathing was normal. When brought to the clinic there seemed to be nothing the matter with her. Her breathing was perfectly quiet and normal; there was no cough; her voice was clear, and there seemed to be no interference with respiration. Suddenly, however, without any apparent cause, she began to struggle as if for air. She became quickly cyanotic, her cry was toneless, and there was frothing at the mouth. An examination of the chest showed a whistling rale over the left bronchus, with weakening of respiratory murmur. She was then chloroformed and a low tracheotomy done, but nothing could be detected even by a sound passed into the trachea. On the fifth day she had several coughing spells, with symptoms of strangulation, and during one of these attacks, a red substance was seen presenting at the trachea wound. This was caught with a forceps, and although but gentle traction was used, the red rubber came away from its attachments, leaving the wooden tube in the trachea. This was forced upward through the glottis and removed through the mouth. It was too large to pass through the tracheal opening. The next day surgical emphysema was seen over the whole anterior part of the chest. The left lung gave numerous mucous rales, with a distinct full respiratory murmur. The wooden part of the balloon measured an inch and three-sixteenths in length, and five-sixteenths of an inch in diameter.—*New York Medical Journal.*

COCAINE FATALITIES.—At a recent meeting of the societe de chirurgie of Paris, a letter from Professor Germain See was read in which he stated that he had collected particulars of two hundred and sixty accidents with hypodermic injections of cocaine, of which twenty-one terminated fatally. The professor considers the drug to be dangerous, and pronounces himself opposed to its employment.—*Druggists Circular and Chemical Gazette.*

THE CHAMPION TOOTH EXTRACTOR.—The champion tooth-drawer of the world, says the *British Medical Journal,* is said to be a monk, Frà Orsenico, of Rome, who operates by the Japanese method—that is, with the simple instruments provided for him by nature in the shape of his thumb and forefinger. His extractions average one hundred a day, but there are days (perhaps when an east wind is blowing) when the number does not fall far short of four hundred. The good brother seems to be as proud of these dental trophies as an Indian brave of his scalps. He has two boxes containing thousands of more or less dilapidated teeth from which he has delivered his patients; these are kept open in his operating-room, doubtless *pour encourager les autres.* There seems to be some doubt as to who has the honor of having extracted the largest number of teeth at one sitting. An American dentist, Dr. Thomas Snell, is said to have relieved a gentleman of twenty-seven in five minutes, but a Plymouth doctor seems to have broken the record by extracting thirty-one at one fell swoop. He would, doubtless, have given an epic completeness to his work by drawing the thirty-second, but, unfortunately, nature had been beforehand with him.

ORIGIN OF THE TERM "LA GRIPPE." (*L'Union Medicale,* Paris.)—A writer in the *feuilleton* of this paper is astonished that his countrymen should use the word "influenza," when they have long had a term of their own for this troublesome malady with much more appropriateness and, as it ought to have, more spiteful a sound. It was so first used, he tells us, in 1743, by Louis XV. when the disease was raging in the early months of that year, in which rain, frost, ice and snow were most dismally commingled week after week, and rheums and fluxions of the chest made all men miserable, and even royal mistresses unpresentable; and from the suddenness of the attack: "*Le roi nomma cette maladie la grippe.*" And in 1427 there seems to have been an epidemic of the same or a very similar kind, for in quaint old bourgeois French we read: "Item at this time, about fifteen days before the feast of Saint Remy (that is toward September 15, Saint Remy's day being October 1), there came a corrupted air amidst us, and from it a very evil sickness which they call *la dando,* and one can but endure it as long as it lasts. And it begins with violent rackings in the reins and lions, just as if one had the gravel, with strong cruel pains; and after that long shiverings, and for VIII or X or XV days afterwards one can neither drink, nor eat, nor sleep, more or less, and then cometh a cough so bad that at sermon time one cannot hear the sermoner for the great noise of the coughers. And one sees not man nor woman but with the mouth and nose all red and sore with the rheum, and when two gossips meet they say: 'Hast thou had the dando yet?' And if she says no, the other replies, coughing all the while, 'Oh, take care, or truly it will cost thee dear.'" A Portuguese translation (*A. Med. Contemp.*) adds: "Dando, dand, dandy-fever, dengue or influenza—all the same thing."—*The Provincial Medical Journal.*

THE MICRO-ORGANISM OF TYPHUS.—Lewaschew states (*Deutsche Medicinische Wochenschrift*) that he has found, in blood removed from the spleen or finger in a number of cases of typhus, organisms which he regards as the cause of the disease. In fresh blood these appear as small, round, highly refractile bodies showing active movement. They lie between the corpuscles. Sometimes the organism is oval in shape and provided with a flagellum, or it may be represented by a thread, slightly enlarged at one extremity. These different forms probably represent one and the same microbe. The rise and fall of the disease are accompanied respectively by increase and diminution in the number of these organisms.—*British Medical Journal.*

A SUPPORTER of the medical profession may be found in Kate Field, of Washington. She says: There are plenty of defects in medical art, and plenty of shortcomings. If an all-wise Creator could not make a human frame perfect enough to keep in order through all the hardships we put it through, it seems pretty audacious to demand of the poor human being who puts us in repair from time to time, that he should make *his* work permanently effectual. Of one thing, too, we may be certain. No profession is followed so largely for the love of it by all classes of its members as medicine; and again, that no other skill and learning is so often exercised without the faintest hope of reward as the experienced judgment of the average physician. If doctors were really the hypocritical experimenters that humorists in robust health seem to think them, they should yet command our respect for their professional enthusiasm and their philanthropy.

THE INFLUENCE OF PREGNANCY ON EPILEPSY.—A very exhaustive article by Dr. Guder on this subject is carried through two numbers of the *Medicinish-chirurgisches Centralbl.* The author has made extended research into the data bearing on this question. This, taken conjointly with his own personal experience of such cases, enables him to draw the following conclusions: That epileptic attacks were, as a rule, absent during pregnancy, but that they were always sure to make their appearance during and after the puerperal period; that there was the fact of the off-spring of such women being predisposed to epileptic or eclamptic attacks, to be taken into consideration. For his part the author was disposed to persuade, as far as possible, epileptics from marriage and that if pregnancy did occur he was in favor of artificial abortion. He thought that an effective means of stamping out, or at any rate of preventing children being born with a predisposition to epilepsy, would be the sterilization of epileptics by castration or ligation of the tubes. As to the predisposition of epileptics to eclampsia there was still a great difference of opinion among observers in this direction. Nerlinger thought that for one thing a differential diagnosis of an attack, occurring during the puerperal state in an epileptic, was difficult to make, as to whether it was an epileptic or eclamptic seizure, and that as to the question of predisposition of epileptics to eclampsia the matter was by no means settled. And also that in young children predisposed by neurotic inheritance to epilepsy it would be a difficult matter to say whether the first attack was epilepsy or eclampsia. Fere thought that there was a close association, in predisposed neurotics, between epilepsy and eclampsia.—*Journal of Nervous and Mental Diseases.*

RECENT CHEMICAL EXAMINATION OF SWEAT.—The secretion of the sudoriferous glands of both man and lower animals has been the subject of critical examination by Gaube. He finds that the sweat of man differs from that of the cow, horse, cat, dog and hog, by being acid in reaction, instead of alkaline, but fails to mention the nature of the acid. Gaube also finds digestive ferments in the perspiration of both man and the lower animals. He has separated a pepsin, an amylase and an emulsion. He terms these diastasic ferments "hidrozymases" and states that the sweat of man contains a larger proportion than the secretion of other animals examined. In the light of the recent investigations of ferments, it is not startling to discover them in any of the secretions. —*Medical Fortnightly.*

ORBITAL HÆMORRHAGE IN YOUNG CHILDREN.—These hæmorrhages occurred beneath the periosteum, in the course of infantile scurvy, a disease generally known as scurvy rickets. The subjects were hand-reared infants, generally between six and eighteen months of age, who had been brought up mostly on "infant foods." After a period of ill-health, spontaneous hæmorrhage came on beneath the periosteum in various parts of the body, sometimes, but not always, during the course of an attack of rickets. In the orbit the hæmorrhage occurred in two forms, either as a line of blood staining at the orbital margin, or as a large effusion producing displacement of the eye and distention of the upper lid; the form which the hæmorrhage assumed was due to the anatomical disposition of parts in the orbit. The hæmorrhage subsided rapidly at first, but did not disappear entirely; the eye was left prominent for many months. The treatment was essentially that of scurvy; in addition to the ordinary food, juice of fresh meat, a little fruit or vegetable, cod-liver oil, or cream should be given. The slighter cases recovered rapidly; the more serious ones were slow in progress and often fatal.—*British Medical Journal.*

MITRAL STENOSIS IN CHILDREN.—Dr. Octavius Sturges in a lecture (*Lancet*) spoke as follows: Mitral stenosis in children, then, which is almost always rheumatic, is not at first disabling. I doubt the wisdom of making patients of these young subjects solely for the reason that their hearts are thus changed. The need for early treatment will depend very much on the recurrence or not of rheumatic attacks, and the worst event to be feared in the course of them is pericardial adhesion. Children who keep free from such attacks will go on for a long time without heart trouble. Other children less fortunate will have frequent recurrence of what is really acute rheumatism, though of short duration, with only slight pyrexia and transient joint pains. With these latter the heart deterioration in the way of dilatation is apt to be very rapid, and is indicated by dyspnœa, palpitation, and presently œdema. And there are two physical signs which as these cases progress indicate what the end is to be. One, and the earlier, is the detection from time to time, with the successive rheumatic attacks, of renewed pericardial friction; the other, and the later, which becomes the more obvious after the rubbing has finally ceased, is rapid enlargement of the heart area, both across and lengthways. Of the origin of this change it does not become us to speak positively in the patient's lifetime. But we know for certain, and can show you in our museum, that the common cause is adherent pericardium.—*Saint Louis Medical and Surgical Journal.*

KATZENJAMMER.—Resorcin is said to act admirably in cases of nausea and depression following a carouse. It is given in the dose of from five to ten grains in plenty of water flavored with syrup of orange peel, and may be repeated once or twice at intervals of half an hour. A single dose of ten grains is, however, said to be usually sufficient.

CATHETERIZATION OF THE FEMALE BLADDER.—Professor Parvin advocates the use of the ordinary male catheter, instead of the female, as by its greater length the bladder can be emptied without soiling the clothes or necessitating any exposure of the patient. It is passed into the bladder just as easily as the other kind.—*College and Clinical Record.*

ANTISEPSIS IN PNEUMONIA.—Albert Robin reported to the academie de medecine a case of broncho-pneumonia, followed by death, in a syphilitic woman undergoing since about a month intensive mercurial treatment. Robin makes the remark that in this case internal antisepsis resulting from the mercurial medication did prove no safeguard against pneumonic infection.—*Deutsche Medicinische Wochenschrift.* J. V. B.

BURNS.—The following is an excellent dressing for burns:

℞ Lanolin,
Campho-Phenique, ... ℥j.
Ung. aquæ rosæ, ... aa ℥j.
Misce. Signa.

Apply two or three times a day.—*Weekly Medical Review.*

TOPICAL TREATMENT OF ECZEMA.—Professor Unna, of Hamburg, (Germany,) prescribes the following salve in the treatment of intensely pruriginous chronic eczema, complicated with infiltration of the deep layers of the skin:

℞ Lanolin, ... 20 grammes.
Fluid chloride of calcium, . . . 40 grammes.
Oil of cade, ... 10 grammes.
Zinc ointment, ... 30 grammes.
Misce.

—*Union Medicale.* J. V. B.

THE DOCTOR AND THE HOTEL CLERK.—A good story is told of the late Dr. Thayer, of Burlington, concerning his experience at a hotel in Cincinnati, where he stopped, while attending a national medical congress, many years ago. Arriving somewhat late in the evening, he went immediately to bed. Upon inspecting his bill, previous to leaving, Dr. Thayer saw he was charged for a supper the night of his arrival, and inquired as to same, saying he had had no supper that night. "But," the clerk said, "you were here; you *might* have had it." "Oh, well," said the doctor, "I can fix that," whereupon he immediately made out a bill against the hotel for medical services, the amount covering the charge for the supper. Upon presenting the same to the clerk, the latter said: "Doctor, I was not aware we had called on you for professional service." "Oh no," said Dr. Thayer, "but I was here, and you *might* have done so." The procedure, being so original, so pleased the proprietor that he presented Dr. Thayer with his whole bill, and asked him cordially to make him a visit in the future. —Dr. J. H. Linsley in *Medical Record.*

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MEMOIRS.

THE USE OF LARGE DOSES OF ACETATE OF LEAD IN HÆMORRHAGE.*

By JAMES NEWELL, Ph. D., M. D., Detroit, Michigan.

I am aware that in presenting an article on the use of acetate of lead in the treatment of hæmorrhage, I am not offering anything which can lay claim to novelty or originality, but I believe that in the matter of dosage of the remedy, I shall be in position to offer for your consideration something not found in any of the works; and which has been touched upon in only the most meagre manner by the writers whose names grace the columns of the medical journals and periodicals of America.

In advocating the use of *large* doses of acetate of lead, and *I emphasize* the word *large*, I may probably in the minds of some be laying myself open to a charge of disregard, and recklessness of the sacredness of human life, from the fact that many of the laity and not a few of the profession entertain the opinion that the drug is a dangerous poison, in the quantity I shall recommend for its administration. I will refer to this phase of the question further on.

All of the treatises on therapeutics speak of the efficacy of the acetate of lead in restraining hæmorrhage, when the location or source of the loss of blood is beyond the influence of such mechanical measures as may be employed to bring about its arrest, but in all the references which I have looked up, and they have been many, I have been unable to discover an advocate of the use of the large doses of which I shall speak. I have also been for many years an extensive reader of the medical press and with the exception of one or two articles, I have not come across any advocacy of the use of the dose I have been accustomed to administer.

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

Whether this absence be due to the fear that the advocacy of such doses might bring odium and discredit on the men using it, or to the fact that the remedy is not so employed, except by a very few, I am not in position to determine, but I incline to the latter opinion as being the correct answer.

I will not trouble or inflict you with quotations or excerpts from our writers on therapeutics regarding the usefulness of the remedy in the ordinary or common dose in hæmorrhage, for you can refer to them at your leisure if you have the inclination, but I will confine myself to the experience which I have had from using the remedy in my own practice, and to the writings of those who are advocates of its hæmostatic action in the dose and manner I shall endeavor to point out. That acetate of lead has a marked influence in arresting hæmorrhages which are located so as to be inaccessible to the ordinary mechanical means employed for their suppression and restraint, I have not the least doubt, but mark you, it must be given in *much larger* doses than is usually employed, or recommended in the books.

This is the only point upon which I differ, in regard to its use, and it is to this that I particularly desire to draw your attention.

The hæmorrhages in which I have found the salt to be exceedingly beneficial, are hæmoptysis, epistaxis, and post-partum uterine hæmorrhage.

That it exerts its hæmostatic action in a method independent of its well-known astringent quality, I have not the least doubt, and that such action is through the influence of the nervous system, I fully believe. "Its effects are similar to those of digitalis: it slows the action but increases the power of the heart, while at the same time, it elevates the tension of the arterioles. The astringent is, however, a dynamical and not a chemical action." ("Bartholow's Materia Medica and Therapeutics," third edition).

The rapidity with which it exerts its action is also difficult of explanation on the supposition of its astringing action on the tissues.

In that alarming form of hæmorrhage, bleeding from the lungs, I have again and again tested its efficacy; and that it will cause its arrest, and that permanently, I am as confident, I was going to say, as that opium or morphia will produce sleep. I fully realize that this is a strong statement, but my experience with the remedy has been so constantly and uniformly successful, is the reason why I thus place such confidence in its hæmostatic action in pulmonary hæmorrhage.

I shall recall but one of the many cases in which I administered the remedy in pulmonary hæmorrhage, not only for the reason that it was a typical case, but for the fact that I am able to thereby contrast its efficacy, with other standard hæmostatics, administered by a physician who had gained a reputation much higher than I ever expect to acheive.

E. C., aged twenty-two, whose father had died of consumption when he was a child, had been ailing for three or four months. Consulted a physician who, in a brusque manner, informed him he had consumption and would die before a year. Neither relishing nor believing the opinion he at once consulted and placed himself under the care of a leading physician of western Ontario, a resident of the city of London, and an ex-president of the college of physicians and surgeons of Ontario. What the diagnosis was, I cannot say, but after six months of treatment, the young man was seized with pulmonary hæmorrhage. He was

seen again and again by his physician, who, though he was able to restrain the hæmorrhage, did not succeed in arresting it permanently; and as a consequence the patient rapidly became weakened and exsanguined.

In the absence of his physician, an alarming and profuse hæmorrhage having come on, I was summoned, until the services of his regular medical attendant could be secured. Of course it was a very undesirable position for me to assume, and I felt a reluctance in having anything to do with the case under the circumstances. It was not only a very critical case, but I was only second choice and felt a repugnance to be playing "second fiddle." Being informed by the messenger that the young man was in imminent danger of dying from the profuseness of the hæmorrhage, I obeyed the summons at once. I made up my mind I would stop the bleeding, so took with me some of the crystallized acetate of lead. I found the patient in a very exsanguined condition, pulse barely perceptible, and spitting out bright red blood by the mouthful. He had that day lost over a quart of blood as it was still in the vessel. As the hæmorrhage had been continuing with more and less profuseness for over a week I was really afraid he would die before I would be able to bring about its stoppage. However, as I had nothing to lose, but everything to gain, I informed both himself and friends, with the utmost assurance, that I would arrest the hæmorrhage before an hour elapsed, not however without some misgiving on my own part as to my ability so to do. I immediately dissolved some of the acetate of lead in water, and had him drink it, and as it was a case in which I had to be prompt and decided in action, I thought it inadvisable to send a boy on a man's errand. I very probably gave him nearly two drachms of the salt. In a short time, not over ten minutes, the bleeding had almost ceased. In an hour I gave him another dose, not less than a drachm, and that was the "wind up" of the hæmorrhage. The only other effect it had was to open the bowels. Of course, after that, I was physician employed until the young man's death, which took place three months subsequently from phthisis. There never was any recurrence of the hæmorrhage. The former medical attendant had prescribed ergot, ergotine hypodermically, gallic, tannic and sulphuric acids, oleum terebinthinæ, etc., as I learned by referring to the prescription file of the local druggist.

I consider this one of the most marked instances of the beneficial action of a remedy, which I ever saw. I could go on quoting case after case of the hæmostatic power of the drug in pulmonary hæmorrhage. "*En passant*," I have never yet seen an instance in which the hæmorrhage returned after its arrest by the acetate. In that troublesome hæmorrhage, epistaxis, I have also seen the beneficial action of the remedy. But possibly some of you may say nose-bleeding does not amount to much anyway, and can always be stopped by the application of cold, and if that fail, by plugging or tamponing the anterior and posterior nares. Many times, of course, you will succeed by using such measures, and the local application of astringents to the bleeding point if it can be discovered; but in a few instances, and I am thankful they are few since the advent of the telephone, the hæmorrhage will break out afresh day after day. You go back, tampon the nares and flatter yourself, that you have mastered the difficulty, only to find out in the course of a day or two, when for cleanliness' sake it becomes necessary to remove the tampon, that the hæmorrhage breaks out again in its full fury. Sometimes again owing to the shrinking of the cotton by

becoming saturated with blood or serum the blood forces its way between the tampon and walls of the nares, and thus makes its escape much to your disgust.

For example, Mrs. L., aged forty-nine, resident of Detroit, was taken with nosebleeding which had continued with more or less violence for four days, when I was called upon. I cleaned out the nose and tamponed the anterior nares with absorbent cotton, into which I dusted tannin. I went home thinking the hæmorrhage would cease, but it did not. Time and again I replaced the tampon. Applied tincture of ferric chloride to what appeared to be the bleeding point, both by swab and atomizer. As the bleeding still persisted I tamponed the posterior nares also. By these means I succeeded in arresting the hæmorrhage several times for twenty-four hours, when it would burst forth again with renewed fury. I then tried tamponing the nares by using a rubber-bag filled with cold water, but found it very badly borne by the patient, owing to its pressure on the soft palate. The blood would also insinuate itself between the rubber and walls of the nares and makes its escape as with the cotton tampon. Failing to arrest the hæmorrhage by the employment of mechanical means, I gave a drachm of the acetate of lead. The hæmorrhage ceased completely in four or five hours, and did not return, much to my rest of body and peace of mind. I should have mentioned that previous to giving the lead, I had prescribed ergot, hamamelis, bromide of potassium, hydrastis, and morphia, but with no beneficial results. There was a red granular looking spot on the septum of the right nostril to which I had previously applied the tincture of iron. This was the point from which I thought the blood made its exit, but the flow was so profuse, and the obscurity it caused made it very difficult to locate the exact spot. The patient was a healthy, hard-working woman, who had no disease of the liver, and was not a bleeder. Her menses had ceased three years previously. She attributed the bleeding to vicarious menstruation, and which I did not trouble myself to deny or dispute, as it afforded both to herself and friends a plausible explanation for the persistency of the hæmorrhage, and a reasonable excuse for my many failures to arrest it. Of course it may be said in this case, that the bleeding ceased spontaneously, and which I cannot disprove, but I have in many similar instances witnessed the hæmostatic action of the remedy exhibited with the same promptness.

I have observed that in quite a number of cases of epistaxis in the young, they fall victims to phthisis later on. In arresting the flow of blood in hæmatemesis I have no doubt but it is equally successful, but never having met with a case in my own practice in which the hæmorrhage was profuse, I am unable to say anything of its usefulness from my own personal experience. It is, however, quite probable that a smaller dose would be found equally efficacious, as the remedy would be brought into direct contact with the bleeding surface.

It is probable in the treatment of post-partum hæmorrhage that the acetate of lead has achieved its greatest reputation amongst those, who are addicted to its use, as one of the chief means employed to arrest the flow. Those of you who have had experience in bad cases of post-partum hæmorrhage know well that the flow is most profuse. I have seen it in some cases, come away so fast, that it gushed out in a stream of large size, saturating the bed clothes, and soaking through the mattress, till it ran down the floor. It is just such cases as these in which the physician must have his wits about him, and must act

promptly to meet the emergency. As it would be foreign to this article, I will not discuss the relative values of the various measures employed to arrest the hæmorrhage, such as pressure and manipulation of the uterus, introduction of the hand and removal of the clots, the various intra-uterine injections, employed by different practitioners, the elevation of the foot of the bed, etc. When you meet with a case of profuse hæmorrhage, do not wait for the production of contraction and condensation of uterine tissue by the administration of ergot, for you cannot have such in less time than five to ten minutes or even longer, and before that the woman may be moribund, or have succumbed to the loss of blood, but instead give a drachm of the acetate of lead dissolved in water, not neglecting the other means useful in arresting uterine hæmorrhage, and my word for it, you will not be disappointed in the promptitude and efficacy of its hæmostatic action.

I will quote the following instance of its use, which I reported in the February number of the *Canada Lancet* for 1878:

On January 7, 1877, I was summoned to attend Mrs. C., aged twenty-two, in her first confinement. Labor progressed normally and in seven hours she was delivered of a healthy female child. After waiting a short time I removed the placenta and as was taught me and as directed in the standard works. The uterus seemed contracted down firmly, and no flooding of any moment occurred. On coming into the room after a short absence, I was alarmed at the exsanguined appearance of the patient, divining the cause I immediately grasped the now relaxed uterus, whilst I introduced my right hand into the uterus, and by making both internal and external manipulation endeavored to excite contraction, the blood in the meantime flowing in a perfect torrent. Realizing that my patient would perish in a few minutes if I did not arrest the hæmorrhage, I called for my medicine case and taking out a tea-spoonful of the crystallized acettae of lead, I ordered it to be dissolved in water, and administered it to the patient at once, and at the same time had an assistant raise the foot of the bed. The effect of the lead was, I might almost say, magical, the flooding ceased at once and in a very short time the uterus contracted and expelled my hand. I then applied the binder with a compress underneath, and after giving some nourishment and an opiate, waited a couple of hours and went home. The patient under nourishment and an occasional opiate made a rapid and safe recovery. In this case I feel quite confident had I trusted to ergot, with manipulation, cold, etc., that before contraction became established, my patient would have sunk never to rally.

In the earlier years of my practice I met with more cases of post-partum hæmorrhage than I do now. In fact for years I have not had a case. I attribute this immunity to the use of Crede's method of placental expression, which I adopted in 1877, soon after the appearance in this country of the American edition of "Playfair's Midwifery." But post-partum hæmorrhage is a complication which sometimes occurs when least expected, and its occurrence well illustrates the truthfulness of the French proverb that "it is the unexpected which is always happening." If you expect to meet with a hæmorrhage you are on your guard and take such precautionary measures as your knowledge or experience has taught you will obviate the difficulty, but when not apprehended and all seems to be plain sailing and everything going on normally, it is then that

cases of post-partum hæmorrhage occur with all their concomitant alarming symptoms. I have never seen a fatal case, but I have seen the patient bleed till syncope occurred. It is just in such cases that the acetate of lead is prompt and effective in its hæmostatic action when administered in the dose I have recommended.

There are some women who are constitutionally bleeders, and who will have a hæmorrhage no matter what precautionary measures are employed. I do not know of any remedy in such cases comparable to large doses of acetate of lead; but the man who would expect to have a permanent arrest of uterine hæmorrhage without having contraction and condensation of the uterine tissue would certainly be a fool-hardy person unworthy the trust placed in his skill, and a very unreliable obstetrician.

I first learned the use of large doses of the acetate from Dr. M. Lavell, a former colleague of our esteemed ex-president, Dr. Donald Maclean, when he was on the professional staff of the Royal college of physicians and surgeons, of Kingston, Canada. Dr. Lavell received his knowledge of the remedy from his obstetric professor, the learned and venerable Dr. J. Workman, still living in Toronto. As I mentioned in the earlier part of this paper, I will now quote some of the writings of those and their experience in the use of the remedy, who have advocated its employment. The following under the caption, "Acetate of lead in large doses in post-partum and other hæmorrhages," was read by Dr. J. Workman, Toronto, before the Canada medical association in September, 1877, and was published in the subsequent January number of the *Canada Lancet:* "It is now nearly fifty years since a discovery was made by my preceptor, the late Dr. John Stephenson, of Montreal, which was regarded by him, and as I think, very justly, as a very important therapeutic fact. About the year 1830 Dr. Stephenson was consulted by a man who was troubled with a varicocele. With but meagre expectation of doing his patient any good, he gave him a dose of Epson salts as a purgative, and two drams of the acetate of lead to be used as a lotion on the scrotum. He did not see the man again for some weeks. Meeting him one day on the street he inquired how he got on. The man replied he was cured. Dr. Stephenson was rather sceptical as to this favorable issue, and questioned him as to the effects of the two drugs. He replied he used the large powder as a lotion and dissolved and swallowed the other. It was very sweet he said, but it purged him well. Dr. Stephenson afterwards examined the scrotum and found the varicocele had really disappeared. He was a man of sharp perception and rapid conclusion. He had twice nearly lost a lady from post-partum hæmorrhage. * * * He resolved to try in her next confinement, should hæmorrhage recur, the effect of a large dose of acetate of lead; but not to wait till it had set in. He gave it sometime before the emptying of the uterus, and to his high satisfaction, the organ contracted promptly, and no hæmorrhage took place. In every subsequent labor of this lady he took the same precaution, and it was followed by the same result. Throughout his obstetric practice which was large, he treated every case of post-partum hæmorrhage with the acetate, generally in drachm doses, repeated if necessary. Not in any instance did the slightest evil follow. Shortly after his first test of its anti-hæmorrhagic action, a servant of the late Professor Holmes was seized with a formidable hæmoptysis. He was placed in the Montreal general hospital. The hæmorrhage resisted all

the remedies prescribed by the attending physician. A consultation of the hospital staff was called. Dr. Stephenson related his experience of the efficacy of the acetate and proposed it in this emergency, but none of his colleagues would venture on his large doses, for they had all been taught and as in duty bound, they all believed it was an irritant poison. The patient, however, was bleeding to death, and they yeilded, but at the same time told Dr. Stephenson he must take the entire responsibility on himself, which he most readily and fearlessly did. * * * The man's life was saved. Some years later I saw him in Dr. Stephenson's office. The doctor sounded his chest and showed us that one lung was sealed up.

Dr. Stephenson, in his midwifery lectures, strenuously inculcated the theory of the anti-hæmorrhagic action of the acetate and its perfect harmlessness in large doses. I have been a faithful disciple, both in my general practice, and as a teacher of obstetrics, and I am aware that a number of my fellow students, and nearly all my pupils, have realized the same valuable results as Dr. Stephenson and myself. I remember one case of very profuse lung hæmorrhage in which I administered, within twelve hours, six drachms. The man was saved and he lived several years after, but finally died of pulmonary phthisis. I gave eight drachms in the course of sixty hours to an asylum patient. In neither of these cases did any lead symptoms, or indeed any other unpleasant result follow. My asylum patient survived her hæmorrhage three years, and died of phthisis also. In conversation with my respected asylum successor, Dr. Daniel Clark, president of the college of physicians and surgeons of Ontario, I requested him to state his experience in the exhibition of the acetate in uterine post-partum hæmorrhage, and in what doses he had given it. His reply was that his usual dose had been a teaspoonful, its action had been prompt and efficient, and he had never seen any collateral result more remarkable than vomiting in exceptional instances; but an invariable coincidence of this symptom was the complete contraction of the uterus. I never but once saw the slightest sign of the evil constitutional results of the acetate, and that one exception occurred in a case of hæmoptysis, in which my consulting friend would not consent to exceed five grain doses, and these he insisted on guarding by one grain of opium with each dose. As the case was his and I could not dissipate his fears, I did not feel called on to contend against his scruples. In due course the peculiar lead gum made its appearance. I believe it will generally be found that in these large doses, it acts as a moderate purgative, within twenty-four hours, and if it be desirable that in order to avert transformation it should be expelled from the bowels in this way, it may be better to err on the safer side, which certainly is not its exhibition in *small* doses.

Not long ago a very clever medical friend when discussing with me the merits of the acetate in post-partum hæmorrhage, exultingly asserted that before it could come into action the woman would be dead. My reply was, "I am convinced you have never tried it in large doses"; and neither had he. So far from slowness of action being the fact, I have often been astonished at its quickness. More especially have I observed this when it has been speedily vomited. The uterus has appeared to me to shrink down into normal globular form almost instantly. I do not believe we have in all our materia medica, a more prompt, or potent promoter of uterine muscular contraction.

Why we should deluge a poor shivering woman with pailfuls of iced water, or inject into the uterus such irritants as the tincture of the chloride of iron, when we have at command so harmless and efficient a suppressor of hæmorrhage, as the acetate of lead, is quite beyond my comprehension.

The following from Dr. Alfred A. Andrews, of Montreal, appeared in the *Canada Lancet* for February, 1878:

"Under the authority of the great name of Dr. Stephenson, I, for many years, invariably had recourse to large doses of the acetate of lead in alarming cases of post-partum hæmorrhage, and I can safely say I have *never* had occasion to regret it. It has never failed me, nor have any ill effects ever followed its use. I have seen the effects of the douche of ice water, of plugging of the vagina with ice, of introducing the hand, of abdominal frictions, but in my experience none of these means compare with the acetate. As to the use of the perchloride of iron injected into the uterus though I know it has high authority in its favor, I have never witnessed its effects, and I should not have the courage to try it, as I know the action of the acetate of lead to be more safe and immediate. I have used it in scores of cases, and I know of no remedy in any disease that is so prompt in its action,—its celerity seems actually electrical."

And now in conclusion, I ask those who have not used the remedy in large doses, in the hæmorrhages I have enumerated, and there are probably many of you, to do so the first opportunity that presents. Give a good *full dose*, not less than a *drachm* of the crystallized salt, and repeat if necessary. Do not be afraid of poisonous effects for they will not occur, if you use the crystallized form. It is in the amorphous or efflorescent form of the salt which the poisonous carbonate is found. Bartholow says in his materia medica, "a very large quantity of acetate of lead is required to produce a fatal effect; not less than an ounce." From an experience in its use, extending over a period of nearly twenty years, I have every confidence in its immunity from poisonous action, when given in the large doses I have mentioned, and of its efficiency and promptness as a suppressor of hæmorrhage.

THE ALBUMINURIA OF PREGNANCY.*

By F. B. TIBBALLS, M. D., Detroit, Michigan.

The young practitioner, with the modesty characteristic of his profession, hesitates to tread the ground trod before by older and abler men, lest his footsteps seem too insignificant when compared with those of his predecessors. My apology, however, for asking your attention to what I have to say is, that I wish to report a case of some clinical interest. My prologue will be as brief as possible.

Eclampsia is the nightmare of obstetrical practice, and so fraught with danger to both mother and child that it is imperative that every effort be made to discover early its approach and prevent its development. Obstetricians and physicians are now practically agreed that renal insufficiency, in some form or other, is the general, if not the sole cause, of eclamptic attacks. Of this

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condition the presence of albumen in the urine is our best diagnostic symptom. I dislike the term "albuminuria" because it commits us to nothing but a symptom, but in casting about in my mind for a heading to my paper, nothing better appeared. I wish to use the term to cover that train of physical and nervous symptoms toward which pregnancy predisposes, and against which prompt, efficacious treatment must be directed, otherwise eclampsia may result.

Albuminuria, in general, is a condition the pathology of which is not well made out, nor do all authorities agree as to its clinical significance. Many of the so-called tests for albumen will precipitate the globulins and peptones which are present in perfectly normal urine. Thus it is that some well-known physiological chemists have been led into error, and thereby given ground for scepticism regarding the value of *any* tests for albumen, and its clinical significance when found. We do know that certain physical and mechanical causes will produce temporary albuminuria irrespective and independent of any serious kidney lesion. Among such causes we may mention: (a) Excess of albumen in the blood or food; (b) increased blood pressure in the renal vessels—arterial or venous—from any cause; (c) violent muscular exercise or convulsive disorders; (d) acute febrile diseases. We must concede that any one or all of these causes may produce temporary albuminuria during the puerperal state. We must allow also for a goodly number of cases in which the transitory catarrhs of the urinary tract, from which the pregnant woman so often suffers, will account for the presence of albumen.

What I am disposed to term *true* albuminuria of pregnancy, is a more serious matter, and to it pregnancy itself must be regarded as the most general predisposing cause. Upon the kidneys is thrown the work of excretion for both mother and child while their functional activity is impaired by changes in the quantity and quality of the blood and by circulatory derangements incident to the puerperium. The arterial tension is increased while the venous return is impeded by the general hyperæmia of all abdominal organs and the mechanical pressure of the enlarged uterus. If the limit of tolerance be reached, renal incompetency must result and the train of symptoms, more or less distinct, of which I shall speak, will develop. We must not forget also that a kidney lesion may have existed, unsuspected before pregnancy began.

Statistics vary greatly regarding the proportion of pregnant women who present albuminuria at some time during pregnancy or labor. Fordyce Barker says about four per cent. Hoffmier, in charge of the Berlin gynecological institution, found one hundred and thirty-seven albuminuric among five thousand pregnant women, or two and seventy-four one-hundredths per cent. In marked contrast to these low estimates we find that Dumas and others report a proportion of one to every five or six cases. Making due allowance for imperfect tests and the varied causes which may produce temporary albuminuria in perfectly healthy persons, we may conclude that true albuminuria, depending upon renal causes predisposing to eclampsia, is of somewhat uncommon occurrence, not more than three or four cases in one hundred. Lusk and Parvin state eclampsia occurs in the ratio of one to every two hundred and fifty to five hundred labors. There must, therefore, be a certain number of cases in which such a tolerance of the albuminuric condition exists that eclampsia does not develop, and conversely cases of eclampsia are met with, though rarely, in which

no renal symptoms have been detected. I do not wish to lay too much stress upon the evidence of albumen alone, uncorroborated by the presence of other symptoms, for, as already pointed out, it may be due to transient and unimportant causes. But albumen coupled with a diminished urinary excretion, œdema and nervous symptoms, indicates a grave condition.

The first symptom which directs attention to the pathological condition is usually œdema, appearing first in the lower extremities, gradually becoming general and being most marked in puffiness about the eyes and face and swelling of the lower limbs and feet. The pulse is usually quickened, small and hard. There may be hæmorrhages, as hæmaturia or epistaxis. Digestive disturbances are marked, as loss of appetite, nausea, pain in epigastrium, excessive thirst, obstinate constipation or persistent diarrhœa. The patient is usually conscious that she is passing a diminished quantity of urine, and the heat and nitric acid test will show albumen in greater or less amount. Casts may also be found. If the disease progresses and eliminative measures fail, in a short time nervous symptoms appear, headache, wandering neuralgic pains, restlessness and insomnia, dizziness, indistinct vision, sometimes even blindness.

In treatment we must keep ever in view two factors: the danger to mother and to child. Statistics show that about forty per cent. of those who escape eclampsia die later from nephritis. The great dangers then to the mother are eclampsia, and the risk that the overtaxed kidneys may become permanently diseased. Tarnier says that four out of seven albuminuric women abort, the fœtus usually being born dead. Dr. McKeough reported before this society in 1888, eleven cases, in seven of which the child was born dead. Therefore the interests of both mother and child demand prompt eliminative treatment, and if this fails to reduce the proportion of albumen and mitigate the graver symptoms, then active operative interference. The fact that so large a number of cases abort indicates nature's remedy. If albuminuria develops as early as the sixth or seventh month, it is almost a certainty that the patient will sooner or later abort, while by early inducing labor, we choose the most favorable period for it, with less risk of eclampsia and a better chance of getting a *living* child.

Of the medical treatment I will simply say that active elimination is indicated. The diuretics, digitalis, sweet spirits of nitre, potassium acetate, etc., should be freely used for the purpose of increasing the activity of the kidneys, the skin kept active by hot baths, and the bowels kept open by the hydragogue cathartics, sulphate of magnesium, compound jalap powder, etc. Sedatives for the nervous system should be given as indicated. The diet must be light and restricted as nearly as possible to milk.

If this line of treatment fails to reduce the œdema, increase the quantity of urine, and diminish the albumen, while the nervous symptoms increase in gravity, it is hazardous to delay longer, and resort should be made to induced abortion at once. In illustration of these views I wish to report the following case:

Mrs. T. D., age twenty-one years, primipara, and about six months pregnant. Was first visited by Dr. Donald Maclean about December 15, who was soon after called from the city and left her in my charge. Patient is a small delicate-looking woman, who, when first seen, presented a good deal of general œdema, which had developed suddenly during the preceding week. No heart lesion detected. Albuminuria of pregnancy suspected and confirmed by an examina-

tion of the urine, which contained epithelium in large amount, epithelial and granular casts and a large amount of albumen. The quantity of urine passed was small and steadily decreased despite the influence of diuretics and salines. No nervous symptoms as yet only œdema, weakness and depression. But four days later I was called at night to find her very nervous, irritable and restless, nauseated, rheumatic pains in limbs, stomach, back, and in region of uterus simulating labor pains, intense headache, dizziness, blurred vision, and some slight convulsive twitchings of eyes, lips and hands. Almost suppression of urine, quantity passed for the day and evening not one-half pint, very dark in color and almost solid with albumen. An active saline cathartic with a hot bath of fifteen minutes' duration cleared up the nervous symptoms, but the free diaphoresis left the patient very weak. For the next three nights a vapor bath was given at 9 P. M., and sleep induced after it by fifteen grains of sulphonal, but still the œdema and the amount of albumen increased, the patient became weaker each day and the nervous symptoms began to reappear. On the following day Dr. Maclean went up with me and we ruptured the membranes and divulsed the os to the full extent by uterine dilator. A hypodermic of one-quarter morphia kept her easy until about 5 P. M., when pains came on and I delivered her two hours later of a boy and a girl, the boy living one-half hour, the girl thirty-six hours and each weighing about two pounds. I kept the patient quiet with chloroform and delivered the first child with forceps to hasten the labor. After delivery I douched out vagina and uterus thoroughly with carbolized solution, using a return catheter. The temperature on third day reached 100°, never higher. At 4 A. M. on the sixth day I was sent for in great haste as "Mrs. D. had gone crazy." I found her very delirious, recognizing only her husband and myself and seeing all sorts of goblins and spectres about the room. Good doses of morphia, bromides, and chloral soon produced quiet sleep from which the patient awoke perfectly rational. This peculiar delirium was attributed by Mrs. D. to an eight grain dose of sulphonal, and by myself to the irritation at that time produced by her breasts which were distended and painful. She made a quick recovery, albumen and casts disappearing like magic and the œdema being quickly reduced. At the present time she is perfectly well with no sign of any kidney lesion or organic trouble of any kind.

This seems to me a well marked, but typical case of albuminuria of pregnancy, in which all eliminative measures utterly failed and only by removing the cause, namely, pregnancy itself, could we have given the patient any chance for her life.

THE BRANDT METHOD OF TREATING TYPHOID.*

By COLLINS H. JOHNSTON, Grand Rapids, Michigan.
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One year ago I presented to this society a short paper upon the hydriatic treatment of typhoid fever, with a report of the treatment of my first case by the Brandt method. Since that time I have treated the majority of my cases in the same manner, and have been so pleased with my results that I wish again to bring to your notice the Brandt method of treating this disease, which, after

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having been tried in thousands upon thousands of cases, in both hospital and private practice, has given such wonderful results in Europe, Australia and America, that it ought to be well understood and practiced whenever it is possible to do so.

The mortality of typhoid fever is not as low as some physicians would have us believe. In New York city from 1875 to 1885 it was forty-one per cent. In 1885 Dr. Delafield computed the death-rate in the New York hospitals to be twenty-four and two-thirds per cent. In Germany, recently gathered statistics show the mortality under expectant treatment to be twenty-one and two-thirds per cent. In the city of Chicago last year it was seventeen per cent. In Harper hospital, Detroit, last year it was thirty-six and four-fifths per cent. From the secretary of the Grand Rapids board of health I learned that the mortality from typhoid fever in this city in 1885 was thirty per cent.; in 1886, thirty-eight per cent.; in 1887, twenty-seven per cent.; in 1888, thirty-two per cent.; in 1889, twenty-one per cent.; in 1890 (one hundred and eighty-three cases), sixteen per cent.; in 1891 (two hundred and twenty-three cases), nineteen per cent.; in January, February and March, 1892, there were eighty-three cases, twenty-one per cent. of whom died. From April 1, 1890, to March 1, 1892, there were sixty-one cases of typhoid fever treated in Saint Mark's hospital, thirteen and one-tenth per cent. of whom died. During the same period there were fifty-three cases treated in the U. B. A. home and hospital, nine and four-tenths per cent. of whom died.

Now, let us consider for a few moments the results of the cold water treatment in the land of its birth. The statistics are obtained largely from military hospitals, and are therefore especially valuable. In Munich the death-rate has been reduced from twenty and seven-tenths per cent. under expectant treatment to six per cent. under a more or less rigid enforcement of the Brandt treatment, and the strict and systematic hydriatic method has reduced the mortality still further to two and seven-tenths per cent., having had but six deaths in twenty-two cases.

In Stettin, where Brandt himself has lived and labored for thirty-five years, the hydriatic treatment has reduced the mortality of typhoid fever from twenty-six to five per cent., and the rigid enforcement of the same has reduced it to less than one per cent. In France the cold water treatment is rapidly gaining ground. In one hospital in Lyons the death-rate from typhoid has been reduced from twenty-six per cent. to seven and three-tenths per cent., and in another hospital to three per cent.; and the Paris academy of medicine has lately offered a prize of five thousand francs for the best essay on the hydriatic treatment of typhoid fever. From the Brisbane hospital, Australia, the following striking figures have recently been published: One thousand eight hundred and thirty-eight cases under expectant treatment—mortality fourteen and eight-tenths per cent.; in complete bath treatment, one hundred and seventy-one cases—mortality twelve and three-tenths per cent.; strict bath treatment, seven hundred and ninety-seven cases—mortality seven per cent. Brandt has collected from various sources the record of five thousand five hundred and seventy-three cases which had been treated by his method, with a mortality of only three and nine-tenths per cent. But many imperfectly treated cases are included in this number. Eliminating these, the number treated by Jurgensen, Vogel, Brandt himself, and others, amounts to one thousand two hundred and twenty-three

cases, of which twelve died—a mortality of less than one per cent. Moreover, this rate he thinks too high, as none of these twelve cases received systematic treatment before the fifth day. Of the one thousand two hundred and twenty-three cases, three hundred and forty-two occurred in Dr. Brandt's private practice, only one of whom died.

The cold water treatment is also slowly gaining ground in this country. H. C. Wood, in his "Therapeutics," says: "I have no doubt that very many persons have died in the United States of typhoid fever whose lives would have been saved by Brandt's method, if the American medical profession has risen above the opposition of the laity and above its own prejudices." J. C. Wilson, of Philadelphia, and Barnet, of New York, have pleaded for the general introduction of the method into our hospitals. Osler, of Baltimore, already uses it in the wards of Johns Hopkins university. Hare, of Philadelphia; Shattuck, of Harvard; and many other prominent medical men in the United States are now firm adherents to the Brandt treatment; and Sihler, of Cleveland, has just published a series of fifty-four cases with but three deaths. With the foregoing magnificent and reliable statistics of what Brandt's treatment has already done, are we justified in refusing or neglecting to offer this method of treatment to our patients in this city, when ten out of sixty-five cases of typhoid fever died here last month? Surely the cold water treatment of this disease is destined to reduce its mortality all over the world as has the introduction of asepticism that of surgery.

In the treatment of typhoid fever it is important to remember that high temperature alone is not the chief cause of the fatality. The sooner this idea is abandoned the better it will be for our patients. Brandt never claimed that his bath treatment was directed chiefly against the high temperature. On the contrary this is a secondary object with him. The cold bath treatment does not simply reduce temperature, as does antifebrin and allied remedies, but influences the system otherwise in a marked and beneficial way. The height of the temperature is, however, a most important index of the severity of the disease. High temperature and a dangerous condition of the patient usually go hand in hand, and it indicates not only the condition of the heat regulating apparatus, but reflects also the condition of other nerve centers and organs, the action of which is of the highest importance. Loomis says that failure of the heart is due as much to failure of nervous supply as to the muscular changes of parenchymatous degeneration. Cold bathing exercises a most beneficial effect upon the heart and circulation. It is a true heart tonic. After a few baths there is a marked and permanent decrease in the rate of the pulse, and it soon after becomes stronger. The first signs of heart failure, namely, feeble and rapid pulse, tendency to cyanosis, feeble first sound and apex beat, are diminished or altogether removed. A dicrotic pulse, caused by the paralytic relaxation of the muscular coat of the artery, is always a sign of weakness of the heart and blood-vessels. The effect of the bath on the skin is such as to raise the tonus and produce vigorous contraction of the arteries. The nerve centers are refreshed and dicrotism disappears. Heart failure is therefore lessened, and hence the favorable influences of the baths often seen on initial congestions and hæmorrhages. Not rarely epistaxis, metrorrhagia and certain initial intestinal hæmorrhages are lessened and finally disappear after a few baths.

Upon the respiratory organs, an equally beneficial influence is exerted. The

sudden action of the cold bath upon the skin stimulates the centers of respiration and often excites coughing; the circulation in the lungs is improved and congestion and its dangerous consequences prevented. Rapid improvement of the disturbances of the alimentary tract is a constant and remarkable effect of the Brandt method. The tongue soon becomes clean and moist; taste and appetite return; the initial catarrh of the stomach soon disappears; diarrhœa is suppressed often by a few baths, especially in patients treated from the beginning. The meteorism is subject to almost the same changes as the diarrhœa. It is diminished and disappears altogether in five to eight days. This is the rule. The baths augment the tonus of the intestines and favor the expulsion of gases.

Brandt and Vogel believe that the baths can prevent or moderate the ulceration of Peyer's patches; but they must be used from the beginning, before the infiltration of the glands has attained a high degree and the stage of ulceration is at hand. The hydriatic treatment can have no marked influence on the fully formed ulcer. Pathological anatomy teaches us that the formation of an ulcer is not necessary in a case of typhoid. In the milder cases the affection of the glands may proceed only as far as the stage of infiltration and then go back, without having proceeded to the stage of ulceration. To this class of cases, the typhoid treated with water from the beginning belongs. What nature does in the one case, art does in the other.

The effect of the baths upon the kidneys is a salutary one; the urine is *increased* in quantity. While antipyrin and allied remedies diminish the excretion of urea and nitrogenous elements, the baths increase their excretion and thus aid in the elimination of the noxious elements of the disease. The baths seem to have a decided prophylactic effect upon the kidneys; their circulation is improved, and albuminuria, if present, disappears. Of sixty-nine patients with scarlet fever treated by Vogel with cold baths of a temperature of 70° every three hours, when the rectal temperature was 102.5°, five had nephritis, none died. Of fifty-six such patients not treated with water, nine had nephritis, and of these five died.

Upon the disturbed functions of the nervous system the baths act in a most happy manner. Headache, delirium, restlessness and stupor regularly disappear; refreshing sleep follows. Nor does this improvement always coincide with the reduction of the temperature; the cold water has a direct action upon the nervous system independent of its antipyretic effect. Complications of any kind are rare. Brandt says: "If the hydriatic treatment is carried out systematically, severe hæmorrhages, intestinal perforation, peritonitis, abscesses, etc., are never met with, excepting when complications existed before the water treatment was instituted.

The execution of the Brandt treatment is simple and easily carried out. A portable bath tub is placed near the bed and half filled with water at a temperature of 70°. Every three hours, while the patient's rectal temperature is 102.5° or over, he is placed in the bath up to his neck for fifteen minutes. The chest should be completely covered. The water should be renewed every two days. The patient may step into the tub himself, or is lifted into it, and if very weak, may be given a stimulant before entering it. In the middle of the bath the patient should drink a glass of cold water. During the bath affusions to the head should always be made, and the surface of the body, excepting the

abdomen, should be gently rubbed to bring the heated blood to the surface and thus guard against internal congestion. The bath lasts ten to twenty minutes, the usual time being fifteen. The patient is then rapidly dried off, his legs wrapped up in a flannel blanket, and he is put to bed. If he complains much of the coldness, a jug of hot water may be applied to his feet.

The physician and attendants making their first trial of this method may be alarmed at the small, hardly perceptible pulse, the shivering of the body and the cold hands and feet; symptoms lasting fifteen to thirty minutes after the patient has been returned to bed. But all fears of ill consequences can be confidently allayed. I have in my limited experience seen no incident which gave any alarm. Vogel says on this point: "The objection to the cold bath on account of the danger connected with it has been completely silenced after the thousands upon thousands of baths that have been given in Germany and France"; and another writer says: "After an experience of thousands of baths, a cold bath of 60° to 66° Fahrenheit may be said to be absolutely without danger to a feverish patient of a normal constitution, and that it may be used when high fever is present, even if the diagnosis cannot as yet be made. Dr. Vogel, who had an attack of typhoid fever, and who took ninety-two baths during two weeks, of 57° to 61°, and of fifteen minutes' duration, says: "I will freely admit that the stepping into a bath, always without aid, with a body temperature of 104°, will, on account of the contrast, produce a feeling of shock which is by no means pleasant. But this lasts only a short time; the cooling off process which follows it acts very pleasantly. It is not difficult to endure the prescribed fifteen minutes. Near the end of the time, the longing for subjective warmth makes itself felt; and after the rapid but thorough drying, there follows in the warming of the surface of the body an inestimable feeling of satisfaction and relief."

About thirty minutes after the bath the temperature should be again taken to gain a correct insight into its effects. The patient now feels very comfortable, and it is a very convenient time for the administration of nourishment, after which refreshing sleep often sets in, which should not be disturbed.

The temperature of the water should vary between 60° and 70°, according to the intensity of the fever and the resistance it offers to the cooling process. Statistics show that lukewarm baths of 80° or 90° do not give good results, and in my own hands, the gradually cooled or Ziemssen bath has not been satisfactory. To humor the patient and his friends, however, I usually make the first bath 90°, the second 80° and the third 70°. An important rule is, to lower the temperature of the water in case the desired reduction of the patient's temperature be not attained. In the case of children, one may as a rule use the regular formula of 70°; the duration, however, should be shorter, being five to ten minutes usually, as the resistance of the fever in children is less. Children prefer, even more than adults, the cold and short bath, to a warm and long one.

Neither pregnancy nor menstruation are, according to Brandt, contraindications; and the onset of pneumonia presents a twofold demand for the cold water. A pneumonic patient dies from heart insufficiency, and no one can deny that the baths are an admirable heart tonic. On this point Jurgensen says: "The cold bath (in these cases) is the most reliable sheet anchor, especially in those cases where in consequence of the attack of typhoid fever which has preceded the pneumonia, the heart has already suffered."

Intestinal hæmorrhages in typhoid fever are of two kinds, early and late. The early hæmorrhages do not require the cessation of the baths. The latter exert a favorable influence upon the hyperæmia of the intestinal mucous membrane upon which these early hæmorrhages depend. The late hæmorrhages demand a temporary if not a permanent discontinuation. Experience, however, shows that the early use of the baths prevent this complication. The tonic action of the water upon the heart and blood-vessels improves the circulation of the intestinal mucous membrane, thus directly influencing in a favorable manner venous stasis and the formation of sloughs upon which the hæmorrhages depend. Vogel says in this connection: "A shortening of the course of the disease through the annihilation of the pathogenic organisms during their development in the glandular organs, or a specific abortive action, cannot be ascribed to the cold bath treatment; this method only *keeps up* the vital processes in the diseased tissues. Thus an early and systematic administration of the Brandt treatment will prevent ulceration in the intestines and the too often fatal hæmorrhages. In fact the hydriatic treatment keeps all of the pathological processes within safe limits, thus making a mild case out of a grave one." The total duration of the disease is shortened two to three weeks by preventing complications, and preserving the strength of the patient.

But these happy results are attained only by early use of the baths. The hydriatic treatment must be carried out from the beginning of the disease to insure perfect results; and the patient kept almost in an afebrile condition. By beginning is meant the first five days. The effect of the baths is best called a prophylactic one. The fever, if left to itself, produces new change every day. Only when the harm which has *been* done is of relatively minor importance, when the *fever only* is still the important factor, can this treatment be expected to give its best results. In the later stages of the disease it will not always repair the damage which the mistakes and omissions of medicinal treatment have allowed to arise. The object of the water treatment is exclusively to force the disease into a normal course, and to prevent complications. Now, to this end, every case of typhoid fever, whether grave or mild, should be treated with water. For who knows any reliable sign in the beginning of a case that will insure a mild course? Who does not know that apparently mild cases suddenly assume a grave form? Ziemssen says: "The very worst cases are apt to begin with low temperatures and mild symptoms." In seven of his fifteen fatal cases, the physicians who had been treating them previously excused themselves for neglecting the method by the apparent mild course of the disease.

Brandt boldly asserts, on the strength of one thousand two hundred and twenty-three cases, of which only twelve died, that all cases of typhoid fever coming under treatment before the fifth day should recover. The objection will be made that the diagnosis will often not have been made by that time. True, but if the case turns out to be other than typhoid, so much the better. The antithermic effect of the cool bath is as beneficial in pneumonia, pleurisy, any of the acute exanthemata, or any febrile disease, as in typhoid fever. In any sickness in which the fever attains a considerable height, or is of considerable duration, the cold water treatment is not only justified but is one of the very best remedies at our command.

SURGICAL MEMORANDA.

By JOHN SNYDER, M. D., Mecosta, Michigan.

CASE I.—EPILEPSIA GRAVIOR OF SIX YEARS STANDING COMPLETELY CURED BY OPENING AND STRAIGHTENING THE CERVIX UTERI.

Miss B. S., a tall, fair, young lady, age nineteen years, moderately well nourished, presented herself May, 1891, for relief from very severe epilepsy.

She had been subject to epileptic attacks at night since her thirteenth year—the beginning of her menstrual life. She had started well on the menstrual rhythm and for five months presented no deviations from the normal. But after this period of well-being she became irregular, going sometimes six months or a year without menstruating and at those rare periods of the flow she would suffer excruciating pain. During this time she fell a victim to epilepsy. The attacks occurred in series until the year preceding her appearance at my office, when she scarcely had any respite from these terrible seizures.

She had consulted numerous medical men, taken untold quantities of patent medicines, and finally ended by drinking the potion sold by an "eminent specialist" in New York city, whose advertisement announces "I cure fits." The probability was she had rung the therapeutical changes from alpha to omega.

Her mental condition was rapidly becoming deplorable. Irritable and morose, she avoided society and all indications pointed to her speedy entrance into that unfortunate class of human beings—the imbecile.

Examination was thorough and was conducted with patient practically nude. Search was made for every conceivable cause of her trouble, and my patience was not rewarded until discovering a pronounced anteflexion of the uterus and a very small cervical canal and uterus somewhat over half normal size. The cervical canal was nearly closed at internal os. Left ovary hyperæsthetic.

The indication for treatment thus became clear. Consequently I enlarged and straightened the cervical canal by passing a knife through the internal os and by introducing a glass tube three-sixteenths of an inch in diameter, slightly curved, with a flange on its lower end. This tube was held in position by borated cotton tampon. The patient was kept in bed one week. She wore the tube three weeks when the canal had healed open. Daily vaginal antisepsis was practiced.

Two weeks after removing the tube she menstruated normally and has been regular ever since. Her epilepsy was cut short as if by magic. She has gained over thirty pounds in weight, and her mental organism has been revolutionized.

CASE II.—EXTENSIVE NECROSIS OF RIGHT FEMUR AND KNEE-JOINT. AMPUTATION AT JUNCTION OF UPPER AND MIDDLE THIRDS OF THIGH.

Mrs. B. F. P., age thirty-nine years. Eighteen months ago she began to suffer with subacute arthritis of right knee. The trouble with the knee followed an attack of la grippe. The joint finally became so painful and swollen that she consulted a faith-cure from Ionia, who would gently stroke the knee and tell her that her pain would all leave and she would be well. But, unfortunately for her, as soon as the operator's back was turned, the pain would recur. Still this tomfoolery was persisted in for over a year, mainly on account of the patient's dread of the knife or of some other barbarous mode of treatment she fancied a regular practitioner would employ.

At the time of operation, which was advised at once, the limb was bent at an angle of 45° and on attempting to forcibly straighten it, the articular surfaces of the knee broke down like pulp.

An incision for excision of the joint was then made but the bones were found to be very soft and filled with pus. Without any delay the thigh was amputated in the middle but the necrosis extended even higher up and I was compelled to reamputate. The arteries were ligated with catgut and the external wound sewed with silkworm-gut. The stump was entirely healed in twenty days.

This was a case reduced to the lowest point by the neglect to give the joint rest in the beginning. It also points a moral relative to the impostor who presumes on powers possessed by divinity alone.

CASE III.—OVARIOTOMY FOR FIBRO-CYST OF LEFT OVARY.

MRS. McG., age forty years. Had been a sufferer for over five years with pain in left ovarian region and for a great many years was subject to hystero-epilepsy. She had gone the usual rounds of the medical brethren, including an eminent specialist in a neighboring university, and from all these sources she received a typical procrastination treatment.

On examination a tumor of fair size was found in left iliac fossa. The growth was removed and proved to be a fibro-cyst of left ovary. The fibrous portion had partially undergone calcareous degeneration. Wound healed by first intention. Time of operation, twelve minutes.

Since the operation pain has ceased and the epileptic seizures have lessened in intensity and number.

CASE IV.—APPENDICITIS: REMOVAL OF ABSCESS CONTENTS.

MR. E. G., age twenty years. Had a localized inflammation about cæcum and after the subsidence of the inflammation a swelling was left which fluctuated on manipulation. The patient did not improve beyond this point and an operation was determined upon to evacuate the abscess.

An incision was made directly over the swelling about two inches in length. The cavity was washed out with bichloride and a small hard kernel the size of a cherry pit was removed. A glass drain, one-half inch in diameter, was then introduced and external wound dressed with ordinary antiseptics. There was quite a shock, but in ten hours after operation patient was in fair condition. He made a perfect recovery in a few days.

CASE V.—LARGE PELVIC ABSCESS.

MRS. H. G., age fifty-two years. This patient when seen had been suffering some two months with a very large pelvic abscess which had been imperfectly opened. Two long incisions were made, an inch drainage tube put through abscess cavity, and daily irrigations practiced with pyoktanin violet, one to four hundred. The case steadily picked up from one of nearly hopeless asthenia to very good health in two months after operation.

Another case of pelvic abscess was treated with bichloride irrigations and progressed slowly, but when pyoktanin violet was employed the formation of pus was immediately cut short. The value of this new remedy can be thoroughly appreciated by its happy results in cases of this nature.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, APRIL 11, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

REPORTS OF CASES.

DR. E. T. TAPPEY reported a case of extensive warts on the hand and wrist which had been severely cauterized with silver nitrate and a great deal of inflammation followed with inflammation of the lymphatics of the arm. Two or three days after a very decided inflammation of the lymphatics of the leg on the same side developed together with a peculiar purpuric condition of the skin of the leg. The man is doing well now, the skin and lymphatic lesions subsiding nicely.

DISCUSSION OF PAPERS.

DR. F. B. TIBBALLS read a paper entitled "The Albuminuria of Pregnancy." (See page 296).

DR. J. H. CARSTENS: These cases of puerperal albuminuria with convulsions come down very suddenly and unexpectedly upon us. They usually occur in primiparæ, although this is not an invariable rule. Sometimes multiparæ are subject to them. The pathology is obscure and many theories have been advanced to account for the trouble. The now accepted pathology is, that the trouble is in the solar plexus of the great sympathetic system. *Treatment:* Every case must be judged by itself. There are cases in which it is absolutely necessary to immediately induce an abortion, and there are others which do not demand an immediate abortion. They can be watched and often carried until the child is of a viable age. A great deal depends upon the period of gestation at which the albumen makes its appearance. For instance, if the albumen appears very early we may have to act quickly, but if not until late in gestation we may be able to bridge the trouble over and carry the case to full term or nearly so. The feeling of our patient as to her desire for more children will sometimes influence us somewhat in our decisions. It is not always the amount of albumen found which is the alarming feature, but the severity of the nephritis and the scantiness of the urine passed that gives us the keynote of alarm. I do not agree with DR. TIBBALLS in giving sweet spirits of nitre, acetate of potash, digitalis and other renal stimulants to these cases of nephritis. The kidney is already overcrowded and inflamed and the principle of treatment should be to give the kidney rest, rather than pile more work on this already crippled organ. The skin and bowels should be made to do the work of elimination and give the poor little kidney rest and if necessary induce an abortion.

DR. J. B. NEWMAN: Is the cause of this albuminuria local, constitutional or hereditary? This question the paper has not decided. Some maintain that the medulla or cerebellum are at fault. It seems to me that the true cause of this affection is as yet in obscurity and not well understood. I do not believe in DR. CARSTENS' statement relative to the solar plexus, nor does the theory of pressure on the renal veins appear to cover the ground. Some organizations

seem to have a peculiarity which renders them more liable to this disease and the constitution shows albuminuria during or after specific fevers, such as typhoid, scarlet, measels, etc., and we may have albuminuria without any actual kidney lesion. I agree with DR. CARSTENS as to treatment. Let the kidney rest and flush them out once or twice with oat or barley water—copious draughts. Cathartics and diaphoretics form the chief line of treatment. Carry the child to the eighth month if possible, as after that period they are viable. The convulsions are best controlled by hypodermics of morphine and pilocarpine.

DR. J. H. CARSTENS: The primary cause is in the solar plexus. The central nervous system being implicated secondarily from the circulation through it of the excrementitious material which the kidney has failed to eliminate. The brain substance is anæmic and the meninges hyperæmic.

DR. J. B. NEWMAN: Some maintain that the primary cause is the brain substance.

DR. ALONZO BRYAN: Albuminuria is caused by a stasis or hypostasis of the renal veins. Any adynamic condition is likely to cause albuminuria. In pregnancy we have a stasis of the veins. In typhoid fever a hypostasis from the long maintained recumbent position. This may account for the presence of albuminuria in these conditions.

DR. DONALD MACLEAN: I do not agree with DR. CARSTENS as to the preponderance of primiparæ affected by albuminuria. I believe that if statistics were carefully collected we would find just as many multiparæ as primiparæ affected. The condition, however, is certainly more common in twins. How does DR. CARSTENS know that it is the sympathetic nervous system that is at fault? It is all very well to make that statement, but can he prove it? Neither he nor any other man knows anything at all about the pathology of this affection. I have treated a great many cases of puerperal eclampsia just as DR. TIBBALLS has so aptly described in his paper and have had only one death and that was a case which I was not allowed to handle as I desired. This line of treatment is good. Sound treatment all the way through. Chloroform is of great and undeniable value in these cases.

DR. G. W. STONER: It would be interesting to have these gentlemen make exactly clear what they mean by giving diuretics, diaphoretics, and hydragogue cathartics. Should they be given all together or one after another? If given all together would not one counteract the effect of another? Croton oil promptly and boldly given is a good remedy.

DR. JOHANN FLINTERMANN: Often you will precipitate a convulsive attack by too rapid elimination. The eclampsia may have its causation in a true nephritis or merely in a congested kidney. The bladder should be carefully looked to and all chance of retention of the urine avoided. Premature delivery is to avoided if possible, but if the convulsions endanger the mother's life, an abortion should be induced. It is then a good thing to do. A good diet and proper attention to the emunctories are very important items. Post-mortem examinations show the brain substance œdematous, and the congestion of the meninges is due to the convulsions and not the convulsions due to the congestion. Some claim or have claimed that the albumen is due to the great and continued muscular contraction, but this is a false theory as is fully demonstrated by a case of tetanus which has been recently under my care in which the convulsions were long continued

and intense, but in which not a trace of albumen could be detected in the urine. In these cases it is very important to decide whether or not we have an actual nephritis. Scarlatinal nephritis is about the only one that will get fully well.

DR. F. B. TIBBALLS: As to the pathology of this disease I differ decidedly from DR. CARSTENS. His view is a purely theoretical one and cannot be substantiated by pathological investigation. The kidney must do more and we give the diuretics to flush out the uriniferous tubules which are clogged up. We do the same thing in scarlatinal nephritis. Why not here? At first we did not give very active diaphoretic remedies because the weakly state of our patient would not admit of our doing so. It would be hazardous to try one remedy and then another because we had no time to wait for developments. We had to act quickly and promptly. DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, APRIL 18, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

EXHIBITION OF PATIENTS.

DR. CARRIER exhibited a patient suffering from scleroderma of five months standing. For a number of years she has had a skin disease which has been erroneously diagnosed erysipelas. The trouble commenced with pain in the palms of the hands running up to the elbow, and legs to the knee. The disease now affects the face, the arms, the elbows, the legs to the knees, and there is a large plaque on the abdomen. There has been some improvement under treatment. The prognosis is not very favorable. *Treatment.*—Massage, baths and inunctions. No line of treatment is of special value.

DR. F. W. MANN: What is the etiology?

DR. CARRIER: I do not know. There is probably some nerve disturbance. There is an increase of fibrous connective tissue in the skin, under the skin and through the muscles.

DR. FLINTERMANN: Is there any evidence of nephritis? Or is there any hereditary taint?

DR. CARRIER: No hereditary taint could be detected.

DR. BECELAERE: Are the points of selection of the diseasc symmetrical?

DR. CARRIER: Yes.

DR. FLINTERMANN: Are there any pigmentary changes?

DR. CARRIER: No. We have pigmentary changes in morphea but not in scleroderma. Galvanism of the sympathetic has been recommended.

DR. IRWIN: Is the sensibility lost?

DR. CARRIER: On the right arm it is diminished.

PATHOLOGICAL SPECIMENS.

DR. H. W. LONGYEAR: (1) Ovaries and tubes of a case of hæmato-salpinx. Tubes large and distended with blood. The woman had suffered for two years with pain in left side and ovarian region at each menstrual period. The operation was performed two days ago and the patient is doing well. (2) A case of hydro-salpinx with cysts on each side.

DR. CARSTENS: These are fine specimens and they show plainly that we should operate on this kind of cases.

GENERAL DISCUSSION—"ARE AMERICAN WOMEN DEGENERATING."

This subject was discussed by Drs. HELEN F. WARNER, J. H. CARSTENS, F. W. MANN, J. B. NEWMAN, G. W. STONER, and JOHN FLINTERMANN.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, APRIL 25, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. CARSTENS presented two specimens of diseased ovaries and tubes. (1) Woman had suffered a long time with ovarian trouble. She had had a good many children. After the removal of ovaries and tubes the uterus had a peculiar appearance and after the closure of the wound the uterus was pulled well down for further examination. It was found to be fairly healthy and was unmolested. The woman suffered a profound shock. She rallied somewhat but eight or ten hours after went into a collapse. Internal hæmorrhage was suspected. The wound was re-opened and about a pint of blood removed from the peritoneal cavity. The pulling down of the uterus had released one of the ligatures; the bleeding point was re-ligated but she died in six hours. (2) A case of long-continued ovarian and tubal disease. The patient got along well for four or five days when the temperature went up to 103°. It fluctuated two or three times. There being no evidence of peritonitis but little was thought of the variations of temperature, but finally the wound was re-opened and in the rectus at the point of anterior abdominal fixation an abscess was found. She died from septic infection. Two other operations done on that same day did well and it seemed impossible to locate the focus of infection in the case. My opinion, however, is that it came from the stump to the inside of the ligature.

DR. E. L. SHURLY exhibited a full term monkey fœtus, the only one born in Michigan. It lived three days.

DISCUSSION OF PAPERS.

DR. BECELAERE read some interesting translations from Pagot's "Anæsthetics in Obstetrics."

DR. E. L. SHURLY: Some years ago the practice of giving anæsthetics during labor was very prevalent and I think in consequence post-partum hæmorrhage was much more frequent than at the present day. Giving very large doses, was in my opinion, the worst part of this practice. Patients used to be positively poisoned by too much chloroform. A great many deaths could be charged to this fashion of using chloroform in obstetrics.

DR. T. A. MCGRAW: A new method of resuscitating patients from chloroform is given in current German periodicals. In addition to artificial respiration the chest is beaten by little quick pats over the heart at the rate of one hundred and twenty to one hundred and thirty or one hundred and forty per minute, and cases are given where it did well when artificial respiration seemed to fail. Also in performing artificial respiration the nose and mouth are firmly closed during every fifth respiration thus allowing the elasticity of the ribs and

the descent of the diaphragm to suck the blood from the venæ cavæ into the heart, at the same time making firm pressure on the abdomen to prevent regurgitation and help circulation.

DR. CARSTENS: I think that DR. SHURLY stated the case correctly. I believe chloroform is given often where it is not absolutely necessary, but there are some neurotic cases in which the chloroform is of great advantage. Also when the perineum is very rigid chloroform should be administered, thus allowing it to gradually stretch and permitting the head to slowly sweep out. Only in such cases, in turning, and in instrumental delivery, is chloroform necessary. There seems no doubt that the general relaxation of all the tissues from the chloroform cause post-partum hæmorrhage.

DR. DELOS PARKER: Do you think a small amount of chloroform is not of advantage? Small doses will give very good results. Three or four inhalations are sometimes enough to very much blunt the agony of the ordeal.

DR. BECELAERE: These cases which are apparently benefitted by such small doses receive their benefit from the fact that the patient's mind is diverted. If you make up your mind to use chloroform in obstetrics give it to full surgical effect.

REPORT OF CASES.

DR. TAPPEY: The case of purpura which I reported two weeks ago made a good recovery. A man came under my observation recently who had knocked the skin off his knuckles and he took the fat from a dead cow and bound his fingers up. Swelling of the fingers followed and a purpura appeared upon the other hand. Later on it appeared upon the other hand. Then upon the ears, the nose, ankles, knees and elbows, also upon the mucous membranes of nose, mouth and throat. There was not much constitutional disturbance. Was the purpura a consequence or merely a coincidence.

DR. E. L. SHURLY: The whole morbific action was confined to the skin. I did not known that the fatty acids could produce this condition of diapedesis. This case may throw some light on the pathology of purpura hæmorrhagica. This is a very striking illustration of the cutaneous structures.

DR. CARRIER: There is no evidence that there was not an internal hæmorrhage.

DR. SHURLY: If there had been any parenchymatous effusion it would have been indicated by some constitutional symptoms.

DR. CARRIER: There may have been an effusion into the muscles.

DR. SHURLY: We do not have the same perivascular spaces in the muscles as in the skin.

DR. CARRIER: It is now said that purpura hæmorrhagica is due to a microbe. There is at the present time an extremely interesting case of purpura in the hospital.

DR. SHURLY: It is a well-known fact that the hypodermic injection produces a marked fluidity of the blood and in this case some free fatty acid or fatty alcohol may have been set free in the blood producing a very similar effect.

DR. CARSTENS: The fact that the lesions are symmetrical would indicate that the trouble was central, although it had a local starting point.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, MAY 9, 1892.

THE VICE-PRESIDENT, B. P. BRODIE, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. GEO. DUFFIELD presented an omentum of a patient who had presented the following clinical history: A good deal of pain round about the navel, chronic diarrhœa, undigested food in the stools. A great deal of ascites. The fluid was removed several times and re-accumulated. The case had been diagnosed sarcoma. Post-mortem examination—abdomen tense, three pints of fluid in the abdominal cavity. The abdominal walls were free and healthy. The omentum was hard, white, free and stiff, and the seat of the disease. Some few adhesions were found and an occasional spot of ulceration. Looked like malignant sarcoma. The abdominal cavity was filled with small nodular lumps and the intestines were infiltrated to such an extent as to almost obliterate their calibre. Microscopically the growth was found to be a carcinoma.

DISCUSSION OF PAPERS.

DR. J. NEWELL read a paper entitled "Large Doses of the Acetate of Lead in Hæmorrhage."

DR. J. A. WINTER: I am much interested in the doctor's paper and will certainly put his principles of administration of the drug into practice in suitable cases. The books do not deal largely with the acetate of lead. Five grains is given in text-books as the maximum dose. It is supposed to enter the blood as an albuminate and is slowly eliminated; that thrown off by the bile is re-absorbed, then again eliminated by the mesenteric glands, and finally thrown off in the alvine dejections as a sulphide. I would think it to be a good uterine hæmostatic. It is very slowly eliminated which perhaps is the reason its action lasts so long.

DR. DELOS PARKER: Did you ever use it in ulcer of the stomach?

DR. NEWELL: No. It might be good but perhaps would be a little irritating.

DR. BRODIE: If the bowels do not move do you have any bad effects?

DR. NEWALL: No. I never give a cathartic and never have had any bad results.

DR. BECELAERE: How do you account for the action of the drug?

DR. NEWELL: The action of the drug is too rapid to be accounted for through the medium of the circulation. It acts through the vaso-motor nervous system, on the capillaries and small blood-vessels.

DR. STEINBRECHER: I have given it in five grain doses to control the hæmorrhages of typhoid fever. I would like to ask the doctor if he ever employed it in that disease?

DR. NEWELL: I have never given it in typhoid fever and I am not very confident of the action of any drug in the hæmorrhages of typhoid fever.

DR. BECELAERE: Is there a specific action on the uterine muscle?

DR. NEWELL: It does produce contraction in uterine hæmorrhage.

DR. F. W. MANN: The physiological action of the acetate of lead is on the peripheral organs as seen in lead palsy and its hæmostatic action is from its effects upon the peripheral blood-vessels. The mineral are better than the vege-

table styptics as shown by this drug, but the physiological styptic of the future may be better than any. Recently a solution of fibrin-ferment in calcium chloride has been proved a very efficient styptic. Many physiological experiments have been made which indicate that it may have a wide field of use in hæmophilia, hæmatemesis and kindred conditions.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE AMERICAN MEDICAL ASSOCIATION.

THE American medical association has held few annual meetings that can rank in point of success with the meeting recently held in Detroit. The attendance, which comprised some of the most eminent names in American medicine of to-day, was exceptionally large. For the first time in the history of the association the members found two full working-sessions in operation in the sections of the association. This gave distinct prominence to the scientific objects of the gathering and tended to purge the association of the imputation under which it has not always unjustly rested,—the imputation of frittering away its time in foolish and debilitating deliberations, in wire-pulling practices, and in fractious bickerings upon ethical or pseudo-ethical subjects.

Ethical disputes were not entirely excluded from the attention of the Detroit meeting. The question, as to whether a member of the New York state medical society, who, previous to the schism of that body from the association had been a member of the association, could remain such, was settled perhaps, under the circumstances, in the only way it could be settled. Principles should be maintained, although, when the report of the judicial committee in the case of Dr. Potter came under consideration, the sentiment of a large number of the association would have been in favor of straining a point in favor of more liberal doctrine. However, it is anticipated that good will come out of this occurrence, and some better understanding result from the conference to be held between representatives of the American medical association and the New York state medical society.

The preëminent success of the Detroit meeting in both its scientific and social aspects augurs well for the future of the association. A new spirit is moving over the face of the turbulent waters of the association's past. In a few years the dominion of old fogyism will be broken. The new policy of the association will not be moulded upon the estimable ideals of a past generation, but will be brought into closer relationship with the present needs and necessities of professional life. There is no good reason why the association should continue its present *laissez faire* existence, coming together but once a year, then separating and wielding no further influence over the profession save that exercised by its journal. The association need not pattern its existence on that of a century-plant, whose life between its infrequent inflorescences is one of passive viridity. The association should be bearing fruit all the year round. In order to do this important reforms must be effected. In addition to a well paid secretary or chief executive officer of preëminent ability who should command a

salary of five or six thousand dollars per annum, there should be a number of deputation secretaries whose duty it should be to represent the parent association at all meetings of state medical societies. These secretaries should be engaged in active missionary work; they should advocate the uses and advantages of organization as a means of advancing professional interests; they should organize state societies into effective branches of the parent association, and enlist all the members of these societies as active members of the association. With some well-considered scheme of this kind there would be no reason why the American medical association should not consist of fifty thousand members. Possessing, as such a body undoubtedly would, the best medical journal in the world, there would be no reason why the association should not wield a power for good over the professional life of the country such as no other body could ever hope to exercise.

Every visitor to Detroit departed full of admiration for the beautiful city of the straits, praising highly the hospitality of its citizens, so amply shown in the sumptuous entertainments they provided, and bearing grateful testimony to the excellence and completeness of the arrangements made by the local profession for their reception.

The local profession, in turn, thank their guests for their presence and bid them very heartily come again.

EDITORIAL BREVITIES.

THE INSANE IN EGYPT.

DR. PETERSON contributes to the *Medical Record* an interesting article on the insane in Egyyt. The population of the state of New York is about six millions, the same as Egypt, so that interesting comparisons can be made. New York represents the newest civilization, Egypt the oldest. New York has about sixteen thousand insane under public care, Egypt has only one asylum situated at Cairo with two hundred and fifty inmates. The Koran's prohibition of the use of alcohol, is considered to cut off one of the most fertile causes of insanity. It is curious that out of the two hundred and forty-eight patients in the asylum at Cairo, Dr. Peterson found sixty-four cases to be due to haschisch intoxication.

AMERICAN ACADEMY OF MEDICINE.

PRIOR to the meeting of the American medical association, the American academy of medicine held its annual reunion. The academy aims to leaven the profession of America with the influences born of academic training. As yet the academy has not been an influential body, the methods whereby its members are selected not securing for it, the support of the influential men of the profession. The degrees of A. M., or B. A., are like that of M. D., they may mean anything or nothing. The one may mean that its possessor cannot speak grammatically just a much as the other may mean that its possessor does not know the origin and ramifications of the pneumogastric nerve. The aim of the academy is a laudable one—to elevate the educational standard, but to be an influential body, it must have something more than good intentions, as these alone lead nowhere in particular. Let the academy fill its ranks with the emi-

nent in medicine, even though they, like the greatest of poets, know "little of Latin and less of Greek," and it will soon become a body, from which will emanate all that gives tone and influence to the profession.

AMERICAN MEDICAL EDITORS.

ONE of the pleasantest events of the late meeting of the American medical association, was the princely banquet given by Mr. Geo. S. Davis to the medical editors of America. The medical editors are a bright body of men, and the after-dinner orations were singularly full of wit and pleasantry. Mr. Davis has added another obligation to the citizens of Detroit, in thus giving to these scribblers from remote parts, so pleasant an impression of the city of the straits.

BLOOD DISTRIBUTION IN THE SEXES.

ONE of the strongest morphological arguments, made by Sir James Crichton-Brown, in his oration on sex in education, in establishing the physiological basis of distinctive differences in the emotional and intellectual constitution of the sexes, was that drawn from a comparison of the relative sizes of the arteries governing the cerebral circulation. The distribution of the blood to the brain, in the two sexes, differs considerably. The internal carotid arteries with their branches, the anterior and middle cerebral arteries, supplying the supra-orbital convolutions, the island of Reil, the gyrus fornicatus, the Rolandic area, the angular gyrus, and the first temporo-sphenoidal lobule were much larger in the male than in the female brain. In the female, however, the vertebral arteries and the basilar were much larger. The region of the brain best supplied with blood in the male, were the anterior lobes, while the region best supplied in women were those presiding over the sensory functions.

THE VALUE OF MEDICAL SERVICES.

A LAWSUIT recently tried in New York City to some extent gives the law's opinion on the value of professional services. Dr. W. M. Polk brought suit for services rendered by his business associate, Dr. Barrows. He was consulted in a case of fever and was absent ten days, having to travel to Atlanta. A bill was presented for two thousand five hundred dollars, virtually valuing the services rendered at two hundred and fifty dollars per day. New York physicians testified that the charges were not excessive. The Atlanta physicians deposed that fifty dollars a day would be a suitable recompense. A verdict was reached only after much debate, and this awarded one thousand five hundred dollars to the plaintiff, which is equivalent to saying that a physician's full time is worth one hundred and fifty dollars a day or six dollars an hour.

MEDICAL NEWS.

ARIZONA has now a state medical association.

DR. W. G. HENRY, of Detroit, was married June 1.

THE British medical association meets in Nottingham, July 26, 27, 28, and 29.

ABUSE OF CHARITY.—It is stated that two-thirds of the people who go to the Vanderbilt clinic in New York, give fictitious names and addresses.

THE late Dr. Agnew left an estate of two hundred and fifty thousand dollars.

IT is to be hoped that Gross will have better luck with his monument than Rush.

DR. J. M. KEATING, of Colorado Springs, has resigned the editorship of the *Climatologist.*

PROFESSOR KLEBS has declined the chair of pathology offered him by Rush medical college.

THE honorary degree of L. L. D., has been conferred on Dr. Fessenden N. Otis by Columbia college.

DR. KITASOTO, the eminent Japanese bacteriologist, passed through this country on his way home to Tokio.

THE Mississippi Valley medical association will hold its annual meeting in Cincinnati, October 12, 13 and 14, 1892.

AN EASY BIRTH.—Dr. J. B. Eagleson, of Seattle, Washington, reports a case of birth during the sleep of the mother.

THE foot-ball casualties in England during the season of 1891–2 amounted to eleven deaths and seventy-two injuries.

AN OLD DOCTOR.—Dr. Stanislas Zalewski, a Polish physician, died recently at Bordeaux, aged one hundred and eleven years.

PROFESSOR A. W. VAN HOFMANN, the distinguished German chemist, is dead. Hofmann was the discoverer of the aniline dyes.

THE KELVIN.—"The commercial unit of electricity formerly known as the board of trade unit is hereafter to be called the kelvin."

DEATH FROM THE WHEEL.—A young Englishman has recently died from cardiac angina, the result of overstrain with the bicycle.

AMBULANCES.—The army is to have three hundred new ambulances. They are to be lighter and better in every way than the old ones.

DR. WILLIAM BIRDSALL, of New York, a graduate of the university of Michigan in 1876, and attending physician at the Manhattan ear and eye hospital, died June 7.

METHYLENE BLUE IN MALARIA.—Dr. W. S. Thayer, in the *Johns Hopkins Bulletin*, maintains that methylene blue is efficacious in malarial troubles where quinine has been proved useless.

FOWL-LANGUAGE.—M. du Handray has carried his phonograph into the hen-coop, following the method of Professor Garnier in the study of semian language. The results are said to be astonishing.

THE READING-NOTICE.—At the meeting of the American editors association resolutions were offered condemning the use of the editorial columns for the purpose of advertisers, and proscribing the reading-notice.

A SINGLE child, sent to school before complete recovery from scarlet fever in one of the arrondissements of Paris, was clearly shown to have been the direct cause of a hundred and fifty other cases of that disease with eighteen deaths.

KEELEY AND INSANITY.—The *Pittsburg Dispatch* says: "Eleven graduates of the Keeley institute are now inmates of the Illinois eastern hospital for the insane at Kankakee; ten of these had never been previously confined in a hospital.

A POSER.—The following question was asked a physician in a recent murder trial, by the defendant's counsel: "Do you believe that immaturity of development in relation to a susceptible tone of temperament contributes to instability of conduct."

HOW HE WOULD BE REMEMBERED.—Mr. Lawson Tait, speaking of his choice of honors, said: "Set up to me in the market place a clock and a fountain which would keep the people punctual and would slake the thirst alike of tired men and beasts."

THE VEGETARIAN'S HEART.—Lady Paget writes the following in the *Nineteenth Century* for April: "While the meat-eater's heart has seventy-two beats in the minute, the vegetarian has only fifty-eight, therefore, twenty thousand beats less in the twenty-four hours."

THE BACILLUS OF EPILEPSY.—The announcement is made that Dr. Gerdes, of Halle, has discovered vast numbers of specific bacilli in the liver, kidneys and blood of person who have died of epilepsy. The bacilli injected into rabbits and mice produce epileptic manifestations.

FATHER MOLLINGER, of Troy Hill, near Pittsburg, priest, physician, thaumaturgist and general worker of miracles, is dead. He accumulated three million dollars. His cures were notable, especially in hysterical arthropathies. His methods were of very questionable morality.

THE OIL OF EUCALYPTUS.—About ten years ago the discovery was made that a decoction of the leaves of eucalyptus had the property of removing the scales of incrustation from boilers. A large industry in eucalyptus has sprung up near Haywards, California, due to this discovery.

DETROIT CITY APPOINTMENTS.—Drs. Wm. M. Harvey, Thomas Kenning, and Frank M. Dumas have been re-appointed city physicians. Dr. F. D. Hiesordt has been re-appointed county physician. Dr. Chas. D. Aaron has been appointed city disinfector in place of Dr. Waldo E. Clark, who has resigned.

THE court of appeals of Kentucky, has recently decided that syphilis, pleaded in answer to an action to recover damages for breach of promise of marriage is a complete defense, following the decision of the supreme court of the state of North Carolina in which the same defense was interposed and sustained in a similar action.

HOT SPRINGS, THE DOCTORS, AND THE TOUTERS.—The following circular, says the *Weekly Medical Review*, was adopted by the Hot Springs city council, March 1, 1892: "Do not listen to any one who volunteers advice about doctors. No regular physician will require more than five dollars in advance. If you have letters to a physician, deliver them in person. If drummers find you have such letters, they will tell you the doctor is out of the city, dead, quit practicing, drunk, or something of the kind. Drummers on the trains, on the streets, or at the hotels or boarding-houses will pretend that they are visitors."

A NEW MEDICAL COLLEGE FOR CHICAGO.—Chicago is to have a new medical college. The new institution is to be called by the somewhat awkward cognomen of the "Clinical College of Medicine and Specialty Hospital." No didactic lectures are to be given, instruction being afforded solely by recitation and demonstration.

SUNDOWNERS.—The individuals designated sundowners in Washington, those who practice medicine at night but who labor all day in some government office, have had the following amendment to the constitution of the medical association of the District of Columbia, directed against them: "No graduate of medicine shall be eligible to membership in the association who shall not devote his entire time to the practice of medicine."

HISTORIC GAVELS.—Dr. H. O. Walker presented Dr. H. O. Marcy, late president of the American medical association, with a gavel made from the wood of Pontiac's tree, a tree rich in memories of Indian warfare and bloodshed. Dr. Marcy presented the association with a gavel of no less precious historic associations. It was made from a piece of the charter oak of Hartford with a handle of wood from the United States frigate, Constitution.

AMERICAN MEDICAL ASSOCIATION OFFICERS FOR THE ENSUING YEAR.—The committee on nominations selected the following candidates: Dr. Hunter McGuire, of Richmond, Virginia, president; Dr. H. O. Walker, of Detroit, first vice-president; Dr. H. Brown, of Kentucky, second vice-president; Dr. H. Janes, of Vermont, third vice-president; Dr. Jesse Hawes, of Greeley, Colorado, fourth vice-president; Dr. R. J. Dunglison, of Philadelphia, treasurer; Dr. W. B. Atkinson, of Philadelphia, secretary; Dr. Montgomery, assistant secretary; Dr. George W. Webster, of Chicago, librarian. To fill vacancies on the board of trustees: Dr. Alonzo Garcelon, of Lewiston, Maine; Dr. Leartus Connor, of Detroit; Dr. Perry H. Millard, of Minnesota, and Dr. Patterson, of Washington. Members of the judicial council: Dr. N. S. Davis, of Chicago; Dr. John Morris, of Baltimore; Dr. H. D. Didama, of New York state; Dr. John B. Roberts, of Philadelphia; Dr. A. M. Emmert, of Iowa; Dr. W. T. Briggs, of Nashville, Tennessee; Dr. C. W. Voorhees, of Coldwater, Michigan; Dr. W. E. B. Davis, of Rome, Georgia; Dr. A. Morgan Cartledge, of Louisville.

RECENT PUBLICATIONS.

REVIEWS.

SURGICAL HANDICRAFT.*

MR. PYE'S "Surgical Handicraft" has long been a favorite manual of minor surgery on the other side of the Atlantic. Good reason for this is found in the excellence of the work. It is so thoroughly practical in character and clinical in tone, and so free from the hair-splitting distinctions of the surgical pathologists that the student, who may consult it, will at once gain an insight into the facts for which he may be searching. The illustrations are particularly

good, and will be found very helpful, especially in the treatment of fractures. The marginal references also greatly increase the facility of reference.

The methods of treatment described and recommended by Mr. Pye are not in any sense antiquated; they are fully up to date, and the manual compares favorably with any work on the subject which has recently issued from the medical press.

The publishers have done their part of the work in an attractive manner. The binding in leather is durable and neat.

*A manual of surgical manipulations, minor surgery, and other matters connected with the work of house-surgeons and surgical dressing. By Walter Pye, F. R. C. S., surgeon to Saint Mary's hospital and the Victoria hospital for sick children, London. Upwards of three hundred illustrations on wood. First American edition from the third London edition, revised and edited by T. H. R. Crowle, F. R. C. S., surgical register to Saint Mary's hospital, and surgical tutor and joint lecturer on practical surgery in the medical school. Price: $4.00 leather; $3.50 cloth. E. B. Treat, New York.

CANCER AND ITS TREATMENT.*

THIS little volume deals with the various forms of cancer. The matter contained in it does not appear to possess any particular merit, or add to our knowledge of cancerous disease. It is, however, a fair resume of the author's experience and the deductions he makes therefrom. The proof-reading has been very defective. As a slight contribution to a hitherto unexplored field the author records the temperature in a number of "inoperative" cases of cancer. The charts do not seem to indicate anything that was not previously known.

* By Daniel Lewis, A. M., M. D., surgeon to the New York skin and cancer hospital, etc. Physician's leisure library. Cloth, 50 cents; paper, 25 cents. Geo. S. Davis, Detroit.

THE ELECTRO-THERAPEUTICS OF GYNECOLOGY.*

DR. GOELET'S name has sufficiently long been identified with electro-therapeutics to render needless any enquiry as to his competence to discuss the problems with which he deals in the present treatise. The work appears in every sense an admirable one. Part one deals with general electro-physics and electro-physiology. Part two takes up the electro-therapeutical measures to be applied in disorders of menstruation, in diseases of the uterus, of the appendages and ligaments and in pelvic tumors.

The work is a fair and reliable statement of the present status of electricity in the field of gynecology.

* By A. Goelet, M. D. Two volumes. Cloth, $1.00; paper, 50 cents. Geo. S. Davis, Detroit.

A TEXT-BOOK OF PRACTICE.*

DR. PAGE'S "Practice of Medicine" is imbued with the modern spirit which prompts such works to be brief and practical rather than extensive and exhaustive. The whole field of disease is passed under review in a volume of six hundred pages. The clinical descriptions are concise and well written, and the

book will be found very serviceable to the student, whose reading has to be on many subjects simultaneously.

The book is very attractively bound in red muslin, and the text is elucidated with an abundance of illustrations.

*A text-book of the practice of medicine for the use of students and practitioners. By R. C. M. Page, M. D., professor of general medicine and diseases of the chest in the New York polyclinic, etc. Octavo: five hundred and seventy-eight pages, illustrated. Red parchment muslin. Price, $4.00. Wm. Wood & Company, New York.

REFERENCES.

BOOKS AND PAMPHLETS.

"The Effect of Fluids on the Strength of Catgut." By D. Braden Kyle, M. D., Philadelphia. Reprinted from the *Therapeutic Gazette.*

"Opening of the Mastoid Process." By Dr. Harry Friendenwald, Baltimore.

"Tait's Operation for the Restoration of Ruptured Perinæum." By H. W. Longyear, M. D., Detroit. Reprinted from the *American Gynecological Journal.*

"The Etiology, Diagnosis and Treatment of the Prevalent Epidemic of Quackery." By Geo. M. Gould, M. D., Philadelphia. Reprinted from the *Medical News.*

"The Teachings of Experience and of Rational Therapeutics as to the Treatment of Pneumonia." By Boardman Reed, M. D. Reprinted from the *Therapeutic Gazette.*

MEDICAL PROGRESS.

MEDICINE.

FORCED RESPIRATION.

Forced respiration in contra-distinction to artificial respiration is at last beginning to be noticed both on this and the other side of the Atlantic. For many years instruments had been devised with which to perform it, but failure through improper apparatus, and erroneous views regarding the resisting power of the lungs and conditions associated with respiration upon man, resulted in the condemnation of what has proved to be one of the most valuable means of resuscitation ever introduced to the world. Decried as it was by the whole medical profession, having been tried and found wanting; looked upon as dangerous to the delicate air vesicles, and erroneously considered as of no more value than the methods of artificial respiration in vogue, the decision of the medical world up to July, 1887, when I made my first operation, was that it was unnecessary, useless and unjustifiable.

When I read my first paper upon the subject before the international congress, 1887, detailing its unquestionable value, the discussion really condemned my operation, because I had made tracheotomy to save the life of a

human being, when the Sylvester method it was urged might have accomplished as much. Had the revelations presented by this first case been witnessed by any of the gentlemen who discussed it, although carefully detailed in my paper, I have no doubt the paper would have been printed in the proceedings of the congress. However, I saved my second case, using forced respiration for fourteen and a half hours before the patient could breathe for himself.

In the meantime I was made acquainted with the novel but untruthful fact that my apparatus was *identical* with that used in the physiological laboratory. Had it been so the second and third cases would surely have failed, as they could not have been carried through with the laboratory apparatus. In the latter case, an unusual and exceptional one, the forced respirations were kept up for twenty-four hours before the patient could be left to breathe for himself. Artificial respiration would have proved certainly a failure in all of these cases. Even Dr. O'Dwyer, who has not had an opportunity to read my publications upon forced respiration in the proceedings of the New York state medical association, has fallen into this error. He states that "Dr. Fell's method, which is identical with that practiced in the laboratories on lower animals, consists in forcing air into the lungs by means of a foot-bellows—the connection between the bellows and the lungs being effected by means of rubber tubing attached to a cannula in the trachea or to a mask applied over the mouth and nose." To both of these means he also adds "there are serious objections." These statements I must positively refute, as they will not withstand the result of practical operations upon man in many instances, as my experience teaches. But first, I desire again to emphasize the fact that my apparatus in all *its essential details* is *very different* from that used upon the lower animals in the laboratory.

That used in my laboratory before I devised my forced respiration apparatus for use upon man, consisted of a large foot-bellows, a rubber tube to connect it with a large brass tracheotomy tube supplied with a valve which had to be turned by hand to let the air pass into the lungs, and turned in the opposite direction to let it pass out.

With this arrangement each time the valve was turned, for the inspiration as well as the expiration, the trachea was given a wrench. I have found that it makes a great difference whether you are wrenching the trachea of a dog or a living human being. I overcome this feature of the laboratory apparatus by making my tracheotomy tube and the valve which controlled the air column in separate parts, connecting them by flexible rubber tubing. This would permit the patient to move about without endangering the trachea. This may be noted as the first feature differing from the laboratory apparatus.

In the laboratory apparatus the trachea had to be ligated around the tube as Dr. O'Dwyer states, but *not so* in my apparatus. To prevent this I screw to the tracheal end of the tube a larger or smaller ring, according to size of the trachea, which fills up the trachea preventing an excess of air passing out by the side of the ring.

This is the second novel feature of difference from laboratory methods.

Again I made the connection between the flexible rubber tube and the tracheotomy tube so that it could be easily and quickly disconnected. This is an important feature, and constitutes the third feature of difference between my own and the laboratory methods.

The valve which controls the air also has some valuable features. (1) With it the air can pass into and out of the lungs at all times, except during forcible inspiration. Fourth and fifth differences from that of the laboratory apparatus. (2) The air from the bellows is constantly passing through the valve during expiration, thus allowing the air to immediately enter the lungs from the air-valve when the piston is pressed down without traversing the whole length of tube from bellows. Also by the removal of the thumb from the piston of valve the expiration takes place immediately without any counter air-current from the bellows. With this arrangement auto-respirations can be assisted instead of interfered with, a factor of importance in many cases I have met with.

This makes the sixth and seventh differences between my apparatus and that used in the laboratory.

In the construction of the bellows I used a diaphragm of rubber dam (now a double bellows without perishable rubber) which equalized and produced a steady, instead of an interrupted or jerky column of air, such as Professor H. C. Wood provides in his so-called "cheaper apparatus," with common bellows. Here we have the eighth difference between my own and the laboratory apparatus.

If I wish to present still further features of difference, I might include the air heater which I also have practically used upon cases of resuscitation of human beings. The eight features of difference mentioned above will, I trust, put a *quietus* upon the question of similarity between my own and the laboratory apparatus. What I have accomplished has resulted from *careful attention* to the details of *practical import* associated with an operation which holds human life in the balance, not by *slipshod* methods which have in the past relegated this operation to oblivion, and which methods some are now trying to revive. If the saving of eighteen human lives, the record of results with which my work must so far be credited, is not an argument in support of my statements what "under the stars" does or will give credence to human utterance? However, I have overlooked another similarity between the laboratory apparatus and my own, the face-mask. Of course, the face-mask everyone will admit who knows nothing about it, was used in the laboratories in the days of Galen. Without joking, however, this constitutes the ninth marked difference between the laboratory apparatus and my own, and yet Dr. O'Dwyer does, what appears to me, an injustice in speaking of the two as being identical. I desire to state that, notwithstanding an experience in laboratory vivisection work for eight years prior to my first operation of forced respiration upon man, it was not until this first operation that I was enabled to conceive its great value. All my experiments, the gradual unfolding through operations upon living human beings of the value of the face-mask, should give weight to my words above those resulting from *experimentation upon dogs;* the conditions are very different. All that experimentation *upon dogs* has revealed as to the value of forced respiration in saving life I had previously demonstrated upon living human beings; when I began my work it was not even known that it would save a dog's life. Now a few words with reference to the evolution of the face-mask. I had begun the operation of tracheotomy upon one of my patients, when my attention was called to the fact that he was dying, the dilatation of asphyxia taking place. I immediately placed the tube of the apparatus in his mouth, closed the lips about it, and

compressed the nostrils; inspiration then being produced, I was pleased to find the purple deoxygenized blood in the tracheotomy incision change to a bright scarlet. I had many demonstrations of this character following, which gave me the idea of the face-mask. Having a rubber cup used for cupping purposes I fitted it to the face and saved several lives with it without tracheotomy before preparing the one I now use.

However, Dr. O'Dwyer states there are serious objections to both the face-mask and tracheotomy, and would intubate for everything in forced respiration. The majority of cases upon which I have operated have been cases of opium narcosis; cases which it is true offer the *widest* demonstrations of the advantage of forced respiration in the long-continued use of the method, and yet it must be borne in mind that the life of the patient is not out of danger until the poison is eliminated from the system. Now I am quite certain that Dr. O'Dwyer or no other judicious physician would recommend a method which would prevent the imbibing of fluids, through which mean we may most readily aid elimination of the poison. Intubation would certainly do this in preventing closure of the glottis, and therefore I have not used it; also, it is a fact that one of the difficulties we have to contend with in these cases is the danger of vomited fluids entering the larynx and obstructing respiration. I must contend that in such cases tracheotomy offers more hope for our patient than intubation, as there is no interference with the passage of fluids to the stomach. Experience has shown again that intubation will be seldom needed when the face-mask offers us as good results without any of the difficulties which must be necessarily met with in intubation. The objections Dr. O'Dwyer urges against the face-mask are not in many cases borne out in actual experience; views based upon it must be conceded as of more value than those of a semi-hypothetical nature. Up to the present time, so far as can be ascertained, I have probably had more operations of forced respiration upon man, than all the rest of the physicians of the world combined. What I may say upon this subject is based entirely upon this experience.

Dr. O'Dwyer states that "in forcing air through the month or nose of an insensible patient, the tongue, unless secured, is almost certain to cause obstruction, or the vocal chords may be forced together by the in-rushing air, and act as a valve as in paralysis of the abductor muscles, because there is no expansion of the glottis as in normal inspiration." This does not generally hold, I can safely state, from the observations I have made and now repeat tersely.

In my eleventh case, a young woman, I used the face-mask for four hours; my fifteenth case, a female, for seven hours; seventeenth case, a female, two hours; case nineteen, an old lady, two hours; case twenty-first, a female, seven hours; case twenty-second, a female, four hours; twenty-fourth case, a male, five hours; twenty-fifth case, a female, two hours. In all these cases, for the time mentioned, which resulted in the majority of instances in saving the lives of my patients, there was absolutely no interference with the air passing directly to the lungs. Furthermore, the chest would heave and fall in many cases in the most natural manner. That such results could be obtained by the cheap apparatus mentioned in "The Year Book of Treatment," 1891, page 193, and lauded as the best, consisting of a face-mask, a few feet of rubber tubing, a pair of bellows, and two sizes of intubation tubes (ordinarily not required), I do not believe. With

such an apparatus which it is stated could be used by "unskilled persons" I am quite certain I would have lost many of my patients. In the cases referred to, if too great pressure was produced, the œsophagus would expand and cause stomach inflation, but by careful inspirations for a time, followed by pressure on the abdomen, it would pass away without inconvenience.

What appears to me may be urged as facts of value in this connection are the following: The passage to the lungs under ordinary conditions of unconsciousness, except, and even sometimes in swallowing, is always open. The air forced into the lungs does not, as is generally believed, cause a closure of the glottis any more than the deep auto-inspiration of ordinary respiration. Exceptions may be taken to all rules of course.

If forced respiration by my method, use of face-mask, etc., be carefully conducted, the lungs may be as fully inflated as under deep auto-inspiration, and the respirations kept up for a period of time ranging from one to ten hours, according to size of individual and degree of obesity. Thin, spare patients appear to be better subjects than those of opposite build. In the few cases in which from continued work with complete paralysis, the tongue has fallen back and occluded the larynx, a ligature has been placed through it and the organ held forward. Usually extension of the neck will raise the glottis, but cannot always be relied upon; in such cases intubation would be of value. After the face-mask has failed in one or two instances I have saved life by performing tracheotomy, which was called for through the cases being narcotized by opium, (*vide* previous remarks).

As to intubation, it may have its place in some cases of forced respiration, but to urge its value over the use of the face-mask when the latter has accomplished so much, is unwarranted.

In my earlier cases I was called to attend an infant eighteen days old, which had been given one grain of morphia through the mistake of an old and experienced homœopathic practitioner. I had not learned the use of the face-mask, and was compelled to make tracheotomy, by which forced respiration was kept up for some four hours. The face-mask would have worked admirably in a case of this kind, but only with a suitable apparatus on account of the short respirations in so young a babe. Through various steps in my investigations, I have been enabled to prove its great value; it will save many a life when intelligently applied where the methods of Marshall Hall, Sylvester, or other methods of artificial respiration will fail.—G. E. Fell, in *Archives of Pediatrics.*

CLINICAL NOTES ON PARALYSIS OF THE DIAPHRAGM.

Paralysis of the diaphragm is a rare affection, but in my opinion it is frequently overlooked, though it may be easily detected if searched for. During the past year I have met with six cases. The first case, which I saw with Mr. Stanley, of Small Heath, was that of a young gentleman who had strained his neck over a horizontal bar in an athletic display. Within an hour he complained of numbness and weakness of his legs, and when I saw him these symptoms had increased. He had difficulty in swallowing, and scarcely any power of phonation. I found paralysis of the right half of the diaphragm, the left half acting but feebly. By keeping the patient absolutely at rest, and by careful

feeding, with frequent application of a faradic current to the right phrenic nerve, the patient was kept alive. The diaphragm gradually recovered power, and in six or seven weeks he was quite well. The lesion in this case was probably hæmorrhage around the cord above the origin of the phrenic nerve, the pressure being greater on the right side.

The second case, which I saw with Mr. Hall-Edwards, was that of a young lady who was suffering from influenza, and I was called in on account of severe neuralgic pain in the right lower extremity. The pain was paroxysmal, and of such severity that morphine injections had to be given constantly. On my second visit I found the right half of the diaphragm paralysed. There was no dyspnœa and no alteration of the voice. We decided to apply a faradic current to the phrenic nerves, one pole being placed at the lower end of the anterior triangle in the neck, the other over the hypochondrium. The patient improved with this treatment for a day or two, and then died quite suddenly. This was in my opinion a case of acute multiple neuritis, and the paralysis of the right half of the diaphragm was due to neuritis of the right phrenic nerve, the implication of the left nerve being the probable cause of sudden death.

The next three cases were all due to diphtheria, and were all fatal. I believe that paralysis of the diaphragm is the cause of the great majority of sudden deaths after diphtheria, and that only a few can be attributed to syncope. I believe also that in many cases the diaphragmatic paralysis is not recognized. Of the three cases one was a man and the other two children. In all the cases paralysis of the legs was present, and there was no difficulty in recognizing the diphtheritic origin of the mischief, though in one case the sore throat had been very slight. While at rest in bed there was no dyspnœa, but phonation was very feeble and defecation and micturition impeded. On examination of the abdomen the diagnosis was readily made. The hypochondrium on the affected side became depressed on inspiration instead of being propelled forward, and by placing the hand under the ribs the non-descent of the diaphragm could be easily ascertained. There was compensatory overaction of the lower intercostal muscles and great enfeeblement of the breath sounds at the base of the lung on the affected side. In each case the right half of the diaphragm was chiefly affected, but I believe this is due to the presence of the liver on this side and to the inability of the weakened muscle to push the organ down, while on the left side the muscle can descend until quite paralysed.

In all three cases the paralysis was recognized a day or two before death, and special precautions taken, but in each case death occurred quite suddenly. One little boy was brought to my consulting room; observing the feeble cough and phonation, I had him stripped and examined the diaphragm; I found it paralysed. This enabled me to caution the parents of his grave danger, and I heard afterwards that he died suddenly the day after seeing me. If both halves of the diaphragm become paralysed, death ensues from asphyxia, and the fatality of diaphragmatic paralysis after diphtheria can easily be understood when we remember the severity of the neuritis which frequently follows diphtheria, some patients being paralysed for a year or more.

As to treatment I would recommend that every case of diphtheritic paralysis be kept in bed from the first, and that plenty of nutritious food be given. Iron and strychnine should be administered in large doses. If weakness of the

diaphragm is observed the patient should be raised in bed with pillows, so that the diaphragm may act more easily. A gentle faradic current should be used three or four times a day, and blistering fluid painted over the course of the phrenic nerve in the neck. Stimulants should be given freely.

The prognosis of paralysis of the diaphragm after diphtheria is very grave, and its onset may possibly be prevented by keeping patients in bed and at rest whenever any signs of paralysis are present. The early recognition of paralysis of the diaphragm is very important from a prognostic point of view.

The sixth case was that of a woman, aged thirty-seven, admitted for a second attack of alcoholic paralysis. The hands and feet were dropped, and the usual symptoms were present in a typical manner. The diaphragm was observed to be paralysed, and the patient died suddenly a day or two after this observation. I am not aware that paralysis of the diaphragm has been previously observed in alcoholic paralysis, or that it has been noted as a cause of sudden death, most of such deaths being attributed to cardiac paralysis. This case emphasizes the great similarity that exists between alcoholic and diphtherial paralysis, and as alcoholic paralysis is recognized as being due to multiple neuritis, the paralysis of the diaphragm being also due to neuritis of the phrenic nerves, we may reasonably infer that paralysis of the diaphragm after diphtheria is also due to neuritis of the phrenic nerves. In none of the above cases could a post-mortem examination be obtained.—Dr. C. W. Suckling in *British Medical Journal.*

BROMISM.

Professor Lépine contributes an interesting article upon this subject. The dose of the bromide of potash has changed very much during the last few years. Gubler found a dose of six grams enormous; most of the French works give ten grams as a maximum dose. Two of the more recent ones, Soulier and Manquat, give this as a limit. Specialists, meanwhile, have a tendency to overstep this, and the tendency seems to be to increase it more and more. Féré, whom every one will concede to be a competent authority, is less reserved than formerly, and does not fear to administer from twelve to fifteen grams. In England, Gowers goes still further, and gives even thirty-one grams at a dose, which he does not advise one to overstep, on account of the vomiting which it is liable to cause. The English do not administer daily doses, but prescribe rather a dose every second, third or fourth day, so that there is given a long time for elimination. As to the German authorities, as for example, Nothnagel and Rossbach, Tappener and Penzoldt, they mostly give fifteen grams as the maximum dose; Bernatzick states twenty grams, and Baehm the same. The writer is not desirous of disadvising the use of these doses as they are sanctioned by undoubted authorities. Experience has also shown that these doses are not dangerous; but the question is, are they necessary.

He does not regard it as sensible to begin with enormous doses when possibly a smaller one will do. Above all, one should not injure the patient, and it is a question whether such doses, as have been mentioned, can be given without harming, even though naphthol simultaneously be given, as Féré recommended. The writer has found antisepsis of the intestinal tract to prevent cutaneous eruptions yet not to influence the nervous depression. He has observed nervous

symptoms of bromism, and he has been struck by their insidious development. The diagnosis is not always easy, and he is convinced that, in case that they are misunderstood they may produce death. Most writers on therapeutics give the symptoms of chonic bromism. Sollier has presented an especially good description. There first appears a dyspeptic condition, which is followed by bronchitis; then eruptions, and finally cachexia, which is characterized by emaciation, an earthy complexion, incipient paralysis of the extremities, trembling of the limbs and coldness, a dirty coating to the tongue, anorexia, diarrhœa, apathy and weakness of memory, sometimes delirium, hallucinations, and intense headache, as well as mydriasis of one eye. Nothnagel and Rossbach also give thirst, and a cough resembling whooping-cough. At the same time there is absence of the pharyngeal reflex and difficult speech, which, in combination with the clouded intellect and tremor of the hands, might lead one into making a mistaken diagnosis of progressive paresis. This is the classic picture of bromism, in its chronic form. The writer does deny the correctness of this, but will question whether all these symptoms will present themselves in the given order. Some may be lacking and the cachexia may appear before the bronchitis; in short, it is of importance for the practitioner to know that the symptoms follow no regular order in their appearance. The writer has recently seen a young tabetic lady, who took the bromide of potash in doses of four grams daily, for the treatment of convulsive attacks. After a few weeks the patient, who was weak and run-down, began to become still weaker and delirious. No eruptions or bronchitis, so that if one had waited for the development of those symptoms, death would surely have intervened. The writer recognizes bromism by the mental and bodily weakness, delirium and difficult speech. If the bromide be discontinued the symptoms soon disappear. Voisin has described a peculiar form of bromism, where, together with the symptoms presented by the writer's cases, there are, besides, distinct and violent delirium, which is described as a general delirium accompanied by hallucinations, ideas of persecution and of fear of being attacked, etc. The writer observed nothing of the kind in his cases. The chief danger of bromism is the depression, which danger is by no means exaggerated. As a rule, leaving off the remedy is followed by a restitution to the normal, yet recovery sometimes may be very slow. Kloepfel has communicated the case of a patient who fell into cachectic state from a three-years' misuse of the bromide of potash, and who required six months to recover. Culler reported the case of a morphine-taker, who was treated with increasing doses of the bromide of sodium, consuming one hundred and twenty-five grams in a week; he fell into a lethargic state, lasting eighteen days, during which time the most violent cutaneous faradization was followed by no reflex. Life was sustained by rectal feeding. Cases which have ended fatally have been recorded. Dr. Hameau has reported a case, where a twenty-two-year-old woman, who was epileptic since her seventeenth year and who was treated with increasing doses of the bromide of potash, two to sixteen grams. In the course of a year she had taken two kilograms of the drug. She was emaciated, cachectic; her forehead was covered with copper-colored papules; she suffered from gastralgic pains and colicky attacks; and, finally, a dry cough bothered her. Delirium set in and she died the following night. A case, described by Dr. Eigner, and of more recent date, a young female epileptic, nineteen years of age, took, in the course

of a year, at least six grams of the potash salt, and in the last two weeks, ten to twelve grams per day. Besides a universal acne and a badly smelling breath, she presented nasal and pharyngeal catarrh, salivation, the saliva being able to be drawn out in shreds, anorexia, meteorism, pains in the forehead and lumbo-sacral region, and weakness of memory. Toward the end there appeared: somnolence, unequal pupils, trembling of tongue and hands, diminution of the sensibility of the lower extremities, and decrease of the tendon-reflexes, as well as hesitating and difficult speech, without any actual disturbance in articulation. Finally there appeared psychic excitment, which increased to delirium, with hallucinations of the different senses. Death took place from broncho-pneumonia. The changes which take place in the nervous system under such circumstances are not well known; the accumulation of bromides in the tissues ie still a disputed question.—*Journal of Mental and Nervous Diseases.*

SURGERY.

LANDERER ON THE TREATMENT OF FRACTURES.

THAT in the treatment of recent, simple fractures constant efforts should be made toward devising means for reducing the length of time of treatment and returning the patient to his labor, functionally capable, on the earliest possible day, all must fully admit. When, then, a surgeon of Landerer's repute sets forth procedures which he avers capable of accomplishing such advance he demands for such the most careful attention.

In the pamphlet under consideration Landerer lays down the broad proposition that early, permanent removal of confining dressings, together with passive or active motion, and systematic, intelligently applied massage, tend to such results.

Before considering in detail the various steps and proofs of this important allegation one may with pleasure note the author's disapproval of the employment of embrocations or ice in the early stage. "They belong," says he "to a by-gone age—they can have no beneficial effect; away with them! The surgeon's first duty is to make an immediate and absolute reduction and to at once apply a suitable, well-fitting apparatus which will maintain correct position." All surgeons will agree that only exceptional cases will be found in which this rule will not apply.

Turning for example, to a simple Potts' fracture, we find that at the earliest possible moment after the receipt of the injury the limb is placed in a suitable position with adduction of the foot, and a moderately padded plaster splint is applied. Under this, pain, muscular contractions and other discomforts abate at the end of twenty-four to thirty-six hours.

On the fourth or fifth day the splint is removed, good position of fragments and foot assured, and another plaster dressing applied, this time rather more snugly. The patient is now allowed to go about on crutches. On the tenth or twelfth day the splint is "sprung off," and systematic massage, with cautiously made passive movements instituted. These are carried out twice daily. On the thirteenth day the patient is allowed to place foot to ground, first with the

dressing, then without, still on crutches. If no contra-indications exist,—old age, constitutional anomalies, etc., which would tend to hinder the ossification of the callus, the patient may be allowed to go about with two canes on the fourteenth day, with one cane on the seventeenth or eighteenth day, and he may dispense with this at the beginning of the fourth week. "Here," says Landerer, "the soft parts receive the same attention as the bony, the ossification is hastened through the local hyperæmia, and œdema is removed."

In the case of a Colles' fracture, after immediate absolute reduction, short flexible splints are moulded to the limb, These do not confine the fingers, active motion in which is encouraged. They are curtailed on the fourth day, and entirely dispensed with on the eighth day, after which time the limb is simply subjected to massage. After fourteen days the patients are able to do light work. The author does not employ plaster of Paris in Colles' fractures, saying with right that he cannot be as certain of the maintenance of reduction when using it.

In fractures of the patella Landerer follows Tilanus and Von Wagner in relying chiefly on massage of the quadriceps, the fragments being drawn together by plasters and the limb resting in a simple splint. At the end of the third week or the beginning of the fourth the patients begin to walk, and are said to be functionally capable, in many cases, in the fourth or fifth week. The author justly deprecates the conventional employment of any form of suture. Fractures of the neck of the femur or of the upper part of the humerus are treated in the same way, passive motion being commenced at a later date in the impacted than in the non-impacted cases. So, as well, with fractures of the leg; these are subjected to massage at the end of the third week, while one week later the patients are allowed to begin to walk. As a matter of course other plans are adopted when the lesions are very oblique.

Fractures of the thigh are treated in the usual way with extension apparatus, massage being begun in the fourth week. In the fifth or sixth week the dressings are discarded, the patient keeping his bed a week or two longer.

When the author commends the employment of very early passive motion in such lesions as the multiple fractures at the lower end of the humerus we cannot feel that he will command the support of American surgeons, who are now, as a rule, very fully in favor of the principle of rest. We may easily believe him, however, when he says that massage is of much value in cases of delayed union. It is to be regretted that we are denied access to the histories of Landerer's cases or to the only satisfactory testimony, namely, final results, with elapsed time and individual details. His clearly stated propositions are, however, of much interest, and the publication will repay careful study.—*Annals of Surgery.*

THE REMOVAL OF NECROTIC AND CARIOUS BONE WITH HYDROCHLORIC ACID AND PEPSIN.

SOMETIMES it is desirable to remove dead bone without subjecting a weak patient to a dangerous or deforming operation. Attempts have been made with some success at clearing out this bone by a process of decalcification, but there are two chief reasons why failures have resulted as a rule. In the first place, it was discovered that superficial layers of dead bone were decalcified easily enough,

but the acids did not reach deeply through the mass, especially if portions were infiltrated with caseous or fatty *debris*. In the second place, cellulitis was pretty apt to develop during the course of treatment. After much experimentation I have finally adopted a method of work which seems to be complete. An opening is made through soft parts by the most direct route to the seat of dead bone, and if sinuses are present they are all led into the one large sinus if possible. The large direct sinus is kept open with antiseptic gauze and the wound allowed to remain quiet until granulations have formed.

Granulation tissue contains no lymphatics, and absorption of septic materials through it is so slow that we have a very good protection against cellulitis. The next step consists in injecting into the sinus a two or three-per-cent. solution of hydrochloric acid in distilled water. If the patient is confined to bed the injections can be made at intervals of two hours during the day; but if it is best to keep the patient up and about the acid solution is thrown into the sinus only at bed-time. In either case the patient is to assume a position favorable for the retention of the fluid. Decalcification takes place rapidly in exposed layers of dead bone, and then comes the necessity for another and very important step in the process. At intervals of about two days an acidulated pepsin solution is thrown into the sinus (distilled water, four fluid ounces; hydrochloric acid, sixteen ounces; Fairchild's pepsin, one-half ounce), and this will digest out decalcified bone and caseous or fatty *debris* in about two hours, leaving clean dead bone exposed for a repetition of the procedure. The treatment is continued until the sinus closes from the bottom, showing that the dead bone is all out.

Even in distinctly tuberculous cases the sinuses will close if apparatus for immobilizing diseased parts and tonic constitutional treatment are employed, as they should be in conjunction with our efforts at removing the dead bone.

If suppuration is free in any cavity in which we are at work, it is well to make a routine practice of washing out the cavity with peroxide of hydrogen before each injection.—R. T. Morris, M. D., in *New York Medical Journal.*

CASES OF PNEUMOTOMY FOR GANGRENE OF THE LUNG.

THE first case was that of a man, twenty-four years of age, who, one day in the spring, while eating, aspirated a piece of potato into his trachea. In September he presented consumptive symptoms and signs of a cavity in the apex of the left lung, together with extensive burrowing of pus out into the region of the left nipple. On opening the pus cavity a fistula was discovered leading up to the lower edge of the left rib, of which a piece was resected. A trial puncture into the lung revealed a slight quantity of pus. An opening was made into the lung by means of the handle of the scalpel and the fingers, as the pulmonary tissue was easily torn with the finger. No large cavity could be found; the wound was tamponaded with iodoform gauze. The patient's condition improved after the operation; the purulent discharge ceased and the fistula healed. The physical signs of the apex as well as a profuse purulent secretion, although it had lost its gangrenous odor, showed that a cavity was still present. As the general condition of the patient improved and he wanted to return home, while the cavity showed a tendency to heal, he was permitted to go.

The second case was that of a man greatly run down, who was admitted to

the hospital with terribly putrid expectorations as well as symptoms of a large cavity in the lower lobe of the right lung. Trial puncture evacuated one hundred cubic centimetres of a penetratingly putrid fluid. On the day of the operation this fluid was found to have leaked through the track of puncture and produced a gangrenous emphysema. A portion of the eighth rib was resected below the scapula and the adherent layers of the pleura punctured with the thermo-cautery. A large cavity with smooth walls was discovered containing gangrenous fluid and loose gangrenous pulmonary detritus. Although the gangrenous expectorations ceased and the temperature sank, the patient perished the third day after the operation from septic intoxication. At the necropsy the cavity was found empty, but in its vicinity were found another gangrenous focus of the size of a hen's egg, together with two similar and smaller ones in the same lobe.

The third case was that of a gangrenous empyema, due to a large gangrenous focus of eight to ten centimetres diameter, situated on the surface of the lung. The usual operation for empyema was performed, with resection of the eighth rib in the left scapular line; the gangrenous spot cast itself off and, after seven weeks, the patient was completely well.—*Finska Läkaresällskapets handlingar.*—*Annals of Surgery.*

THERAPEUTICS.

THE PHARMACOLOGY OF ASPARAGUS.

ASPARAGUS is the edible lily. Belonging, as it does, to the same order of plants as the lily-of-the-valley, it is not wonderful that it has become a fascinating article of diet. Botanically, asparagus is nearly related to the asphodel, dear to the ancients, those two plants differing chiefly as regards their fruit. The old fables taught that the manes of the Greeks feed upon the roots of the asphodel, while the gastronomes of to-day delight in the tender shoots of this less comely liliaceous form. It is believed that asparagus was known to the Greeks, although probably not in the finely cultivated stage, in which it now comes to our tables. Pliny and other Latin worthies noted its peculiarities as an aliment, and the *Asparagus officinalis* is supposed to be the *ἀσπάραγος* of Dioscorides.

The plant is probably indigenous to England, and it was a favorite article of food there two hundred years before the art of its cultivation was brought over from Holland. The London markets dispose of vast quantities of this esculent annually, cultivated to a high point of perfection.

The root and shoots of asparagus are not yet discarded from the French "Codex," as they have been from the "British Pharmacopœia." The French use a syrup, to which are ascribed diuretic and soothing properties. At Aix-les-Bains and some other Continental health resorts this vegetable forms a notable part in the regimen of rheumatic patients. It does not agree with all persons alike; in some it occasions more or less gastric disturbance. Partly this may be due to the vegetable itself, since it is not always cut at the period of its tenderest growth, and partly an inadequate amount of cooking may give rise to indigestion.

An alkaloid was separated from asparagus as long ago as in 1805. This was named asparagine, and has been supposed to act, like convallaria and its preparations, as a cardiac sedative.

In former times the plant had some popular repute as an antilithic. The strong odor imparted to the urine of all who partake of the young shoots will account for this notion. Saccharinity of the urine has been observed after its use. It has been reported as the cause of urethritis and as an aggravator of that disease, but very little is known of the truth of these statements as a result of any systematic observations.

The pharmacology of this vegetable is worthy of a closer study than it has yet received. The profession has rested satisfied with the general feeling that the ingestion of asparagus was followed by a renal depuration, without entering a demand for proof thereof. According to the *Medical Press and Circular*, however, "there are grounds for believing that the asparagus tops not infrequently exercise a disturbing influence on the renal functions, causing in some instances a notable decrease in the amount of urine excreted. It is very improbable, however, that any injurious effect is produced on the healthy organism, or this succulent vegetable would not have become a general favorite. As it may give rise to undesirable symptoms in certain special cases, it is well that the medical profession should be made acquainted with the real nature of its physiological action, and we shall look to our scientific pharmacologists for some information on this point." If this suggestion is carried out we trust that those who give their attention to the question will confine their researches at first to that part of the plant which is used so lavishly as an article of food. At the same time, it would be well to determine what differences, if any, can be found in the renal excretion, before and after the ingestion of asparagus.—*New York Medical Journal.*

OBSERVATIONS ON EUROPHEN.

ALTHOUGH in view of the short time that has elapsed since the introduction of europhen the number of cases treated is too small to warrant positive deductions, the utility of the remedy is rendered probable by the observations of many authors, and further experiments are therefore called for. Up to this time I have treated seven cases with europhen, comprising two cases of ulcer of the leg, one case each of chancroid, scrofuloderma, and burns of the second degree, and two cases of recent wounds with loss of substance.

The two cases of ulcers of the leg presented the most unfavorable condition for treatment. The patients were female, belonging to the laboring class, and were respectively sixty-nine and fifty-five years of age. In consequence of their occupation they had been unable to take the proper amount of care, and hence ulcers had formed over the marked varicosities, which persisted for many years despite the employment of remedies of all kinds. In the case of the older patient, Mrs. B., the entire left leg and foot were the seat of a firm infiltration and eczema. On the middle surface of the lower third of the leg there was present an ulcer about as large as the palm of the hand and covered with flabby, torpid granulations, which had resisted various methods of treatment and was constantly spreading. The younger patient, Mrs. F., had on the inner aspect of the middle third of the right leg an ulcer about four centimetres in length and three centimetres in breadth, which had originated from a number of varicose nodes and was surrounded completely by inflammatory induration. I ordered the fol-

lowing treatment: In the evening a tepid bath of chamomile flowers, then insufflation of the entire surface with europhen, application of a loose dressing of gauze and cotton and of a muslin bandage. In the morning a two per cent. ointment of europhen with vaseline and lanolin (equal parts) was applied and the parts dressed and bandaged as before. The chamomile baths and the alternate use of europhen in the form of a powder and ointment had the effect of preventing the crust formations. Under this treatment vigorous granulation tissue soon developed and at the end of about three weeks the ulcers had cicatrized, and the healing has remained permanent up to the present time. These cases are opposed to the statement of Rosenthal that europhen is valueless in ulcers of the leg.

In the case of chancroid I obtained extremely prombt healing by means of europhen. The patient consulted me for a large ulcer which had spread over the entire upper surface of the glans penis and had produced an extensive loss of substance. I employed the method described by Nolda which is as follows: Every morning and evening the ulcer is thoroughly irrigated with sublimate solution, dried with cotton and insufflated with europhen. At the end of ten days the patient was discharged cured.

Europhen was employed also in a case of scrofuloderma occurring in a girl thirteen years of age. The patient had erethic habitus and besides the other symptoms of a severe scrofulosis showed on the neck, the nucha, the angles of the lower jaw, the forearms and legs, numerous deep ulcerations which for the most part took their origin from the lymphatic glands. The long continued employment of such remedies as iodoform, balsam of Peru, and nitrate of silver had had no effect in diminishing the torpidity of the ulcers. I then adopted the following local treatment: The abscesses were opened and the ulcers incised wherever it seemed indicated. Europhen was then applied in the form of the powder and of a two and one-half per cent. ointment with vaseline and lanolin (equal parts) alternatively morning and night. Every third evening a dressing consisting of wads of cotton soaked in a two per cent. solution of carbolic acid was applied and allowed to remain all night. These procedures were always preceded by careful antiseptic cleansing and drying of the parts. To improve the patient's general condition I also ordered arsenic and a proper diet.

After this treatment had been continued for a number of weeks the ulcer cleared up, vigorous granulations developed and cicatrization occurred, while the tendency to formation of new ulcers seemed to have been diminished.

At any rate, by this method of treatment, I obtained results which previously could not be obtained in any other way, and by persisting with it I hope to effect ultimately a comparative cure.

The case of trauma due to thermal influences which I treated with europhen was one of the second degree. A servant girl while engaged in washing was scalded over the entire left forearm by a large quantity of boiling water, so that an extensive formation of bullæ took place. After careful evacuation of the blebs I applied a dressing of the europhen ointment as described above, which was renewed daily, and under which healing ensued promptly in the course of a week.

My further experience with this remedy relates, as above mentioned, to two cases of fresh wounds.

A young girl while cutting bread, injured the first phalanx of the left index finger, a considerable defect of the skin and soft parts resulting in consequence of the oblique position in which the knife was held.

Under alternative use of europhen powder and ointment the wound secreted profusely, then became cleansed and converted into a healthy granulation surface, which rapidly cicatrized from the margins.

The second case was that of a man who in a scuffle received a blow upon the top of the head with the metallic knob of a cane. Two V shaped converging wounds resulted, about three centimetre in length, with jagged margins and marked contusion of the surrounding parts. The wound extended to the periosteum which was also injured. The scuffle occurred at night and the patient consulted the nearest barber, who shaved off the hair over the injured area and applied a strip of adhesive plaster.

Thanks to the "antiseptic" properties of the plaster the patient came to me on the following evening, with violent pains and inflammatory manifestations, swelling of the lymphatics, and marked suppuration of the wounds, the entire strip of soft parts between the sequent having been destroyed by the process. A few incisions were found necessary to drain the recesses which had formed between the soft parts and cranial bones; after irrigation with sublimate solution I sutured the wounds and applied a europhen gauze dressing. In this case I proceeded as in the others by the alternate application of europhen powder and ointment after previous irrigation and sponging of the parts. The wounds healed remarkably well by second intention, the V shaped defect of the soft parts filling up with healthy granulations and cicatrizing with astonishing rapidity.

As far as our present experience extends, it may be positively affirmed that europhen is preferable to iodoform in many particulars. Whether the remedy possesses poisonous properties, as yet undiscovered, which would render its use associated with danger, must be left to time and empiricism to determine. This assumption is, however, in no way justified in the light of our present knowledge, and the favorable results thus far obtained certainly warrant us in taking a sanguine view of the remedy and encouraging the use of europhen.

In conclusion I would again call attention to my method of alternate applications of europhen in the form of powder and ointment, by which crust formations are prevented.—*Balneologische Centralblatt.*

NEUROLOGY.

HYSTERICAL FEVER.

Pucci has studied this subject and concludes as follows:

(1) There is an actual hysterical fever.

(2) It is one of the various forms of hysteria which has been studied, especially during these latter years.

(3) It is produced by a paralysis of the inhibitory cortical heat centres; it may also be caused by an excitement of the thermogenetic centres.

(4) It may present itself in young, marriageable and chaste women; in adults, the married and widows. According to Salomone-Marino it is more

intense and obstinate in women who lead immoral lives. It may appear during pregnancy; it does not disturb pregnancy, neither does it influence the health of the fœtus. Males are also possibly subject to it.

(5) It generally follows other hysteric symptoms of the diathesis, yet it may be an initial symptom.

(6) It always accompanies other phenomena of hysteria, which may aggravate during the period of the highest temperature.

(7) It may assume quotidian or tertian intermittent type and the remittent or subcontinuous type; in the second case assuming the meningitic typhoid type.

(8) It is accompanied by the ordinary symptoms of fever. It may rise to a high degree, and during the apyrexia descend to 35° centigrade.

(9) The same patient may present, successively, various modalities of symptoms, and, in its course, the fever may undergo notable interruptions of several days, and even months.

(10) No general or visceral lesion is ever to be found. Nutrition remains good; but the mental condition of the patient may be disturbed.

(11) It is refractory to all the antithermic remedies and to the salts of quinine; but it may yield to antihysteric treatment.—*Gazzetta degli ospitali.*—*Journal of Mental and Nervous Diseases.*

MEDICAL MELANGE.

ANTIPYRIN IN DIPHTHERIA.—Vianna (*Sem. Med.*, March 30, 1892) has found that antipyrin has a marked bactericidal and toxinicidal action on the baccillus diphtheriæ. He finds, first, that addition of the drug to culture media, in the proportion of two and a half per cent., renders these unsuitable for the nutrition of the microbe; secondly, that when added in the same proportion to actively growing cultures it causes their death within forty-eight hours; thirdly, the toxines are also destroyed, for cultures treated as above, and also filtered cultures to which antipyrin is added, prove much less virulent to guinea-pigs than the original cultures, animals living five to eight, twelve, fifteen, twenty, and twenty-four days, as against three days for the control. Vianna, therefore, strongly recommends antipyrin as a therapeutic agent in diphtheria.—*British Medical Journal.*

THE TECHNIQUE OF INTERSTITIAL IODINE INJECTIONS IN THE TREATMENT OF GOITRE.—Dr. Duguet has used this method since 1874 (*Journal de Mèdecine*). He concludes that the recent fleshy goitres, occurring ordinarily in young subjects, are the ones which disappear the most easily and rapidly; the recent cystic goitres are still more easily and rapidly cured; the goitres of long standing—in general, hard, fibrous, calcareous, sometimes aneurismal—result often very favorably, at other times less satisfactorily. The solution used is one part of iodine to twelve of 90° alcohol, injected with a hard-rubber Pravaz syringe carrying a steel needle, the latter to be cleansed after each time of using with a weak solution of ammonia. In the intervals the syringe and needle are kept in a ten per cent. solution of carbolized oil. The injection is made deeply into the tumor, but only when, after making the puncture, blood does not flow during the ensuing several seconds. The injection is made slowly, watching the

patient's face. For checking the cough which may be produced by the injection, after taking out the needle, the patient takes several swallows of wine. These injections are repeated at intervals of eight to fifteen days, but not during menstruation, nor in patients who suffer from albuminuria. The amount injected is seven to fifteen drops.—*American Journal of Medical Sciences.*

THE LONDON LANCET ON WYETH'S BEEF JUICE.—The following analytical notes and results testify unmistakably to the excellence of this preparation. It is a dark reddish-brown liquid of pleasant beef-like flavor, and free from objectionable preservatives. It contains not only the albuminous principles of beef in an active and soluble form, but in the condition in which they occur in the freshly expressed juice of beef itself. Viewed with the spectroscope a dilute solution is seen to give two absorption bands, characteristic of fresh blood or hæmoglobin. The liquid loses this property, however, as soon as it is boiled; while the coagulated albuminous principles assume a blood-red tint. According to our experiments no less than fourteen grains of solid albuminous principles in every fluid ounce are thus precipitated. The following figures gained in analysis will convey some idea of the eminent degree of concentration through which this preparation has been carried. Notwithstanding this, the vital elements of beef juice it contains have been preserved unchanged. Moisture, forty-four and eighty-seven one-hundredths per cent.; organic matter, thirty-eight and one-hundredths per cent.; mineral matter, seventeen and twelve one-hundredths per cent. The organic materials contain four and fifty-seven one-hundredths parts of nitrogen, and the mineral matter consists largely of common salt and, of course, soluble phosphate. Results like these make it safe to assert that as an example of preparations of this class Wyeth's beef juice is little short of perfection.

THE PROPHYLAXIS OF PUERPERAL DISEASE.—The question as to how far obstetric patients can be safely utilized in the study of obstetrics is still under debate, two opinions prevailing: one, that the use of such material is only safe when antiseptic injections as well as external antisepsis are employed; the other, that all injections and internal examinations are unnecessary and injurious. Frommel, of Erlangen, in an obstetric service of between five and six hundred patients, followed a line of treatment which embraced vaginal injections with bichloride solution, one to two thousand. His clinic was open to about one hundred students, and in connection with the hospital there is a school for the training of midwives. He computes that in abnormal cases, where a thorough study of the case was necessary, from sixty to seventy examinations during the patient's stay in the hospital were found requisite. So long as he continued to employ prophylactic injections, he had no case of sepsis whose origin could be ascribed to his clinic. His morbidity rate varied from five and a half to seven and a half per cent. He was led for purposes of comparison to abandon the prophylactic injections, relying entirely upon external disinfection, when several cases of puerperal sepsis occurred, originating in the clinic, and his morbidity rate rose to eleven and one-tenth per cent. He believes, then, that proper instruction cannot be given without internal examinations, and that such can only be employed safely when prophylactic injections are used.—*Deutsche Medicinische Wochenschrift.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

MILK A VEHICLE OF INFECTION.*

By E. P. CHRISTIAN, M. D., Wyandotte, Michigan.

What signifies the great increase and so general prevalence of typhoid fever in recent years?—an increase and prevalence becoming so notable and general as to have impelled the academy of medicine of Paris to have discussed the subject as an agent most active in reducing the population of France. But this is not a condition peculiar to France alone, or especially, but pertains to all old and crowded centers of population. It means an ever-increasing autogenous intoxication with the reinjested ptomaines and other products of man's excreta and waste, together with those lower organisms which find in these excreta the conditions for their existence, propagation and conveyance to man through the ever-increasing pollution of his water supply with these excreta and their products.

No organization can live in its own excreta or thrive in an environment saturated with its own waste. But lower organizations and these also inimical to man find in this waste the necessary conditions of their existence.

This waste of the body, even when too long retained by reason of torpor or inaction of the excretory organs, will breed disease. Is it less likely to do so when reinjested in food or drink and when it has become the habitat of myriads of toxic though infinitesimally minute organisms? That it is not, we well know, as regards some of the poisons so introduced in milk, in sausages, in canned meats, in ice-cream, etc. Hence so long as we shall continue to contaminate the sources of our drink with our own poisonous excreta so long shall we be liable to increased prevalence of diseases of autoinfection.

Infectious diseases are the cause of the greatest amount of sickness, suffering, expense with deprivation and mortality. There can be no outbreak of such

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a disease without the previous reception into the system of the morbific germ with the necessary conditions in the recipient for their setting in operation those disordered processes which constitute disease. The germs may be taken into the system in sufficient numbers, but the essential conditions may not co-exist; their action may be prevented by some cause, or the resulting action neutralized. But their exclusion is the better and safer way. To prevent their access to the body, it is necessary to know the source of danger and their mode of access. With many of this class of diseases this fact is now pretty certainly known. Especially is this the case as regards the mode of reception of the typhoid germ or germs, for there are probably a variety of germs capable of producing fevers which may be classified under the general name of typhoid, or else different phases of development and transformation of the one germ may be capable of producing essential varieties of the typhoid or enteric type of fever. Also it is a question whether these same germs may not be the cause of other forms of disease, perhaps, however, only by lowering the vital powers of resistance to the action of other varieties of morbific germs either received at the same time and more speedy in setting up their specific morbific processes, or else previously received and dormant until a lowered vital resistance made this action possible. The typhoid germ is assumed to gain access to the body through the drinking water, and also indirectly from the water through the milk of the cow. To this particular source of infection, to the fact of its being probably a much commoner source of infection than is generally supposed, and if so, to ask an answer to the question, "What are we going to do about it?"—to call attention to this is the intent and design of this paper.

How singular it will be if by the advance of knowledge as regards the source and causes of infectious diseases, it shall appear that those domestic animals which have contributed most to man's sustenance and comfort—his chiefest dependance in all stages of his progress from a merely pastoral condition to that of the infinitely complex and diverse occupations of the highest modern civilization have been also the source of many of his greatest afflictions, the disseminators of death-spreading plagues and pestilences. And if this should appear to be the case it will be only a truth in accordance with the general economy of nature. The analogy holds as regards the laws governing man's moral nature and of his physical environment.

To what great and constant dangers, is it being revealed to us, that man is exposed by his companionship with animal life from the highest to the lowest, not only with those whose companionship is only occasional and voluntary on his part, with those whose use is inestimable, but also with those lower forms of life whose companionship is involuntary, unsought, and which are known only as pests and of whose beneficent uses we have no conception such as those now known carriers of mortal infections, as the house-fly and the mosquito. And indeed there seems reason to assume that the more insignificant the organism to our senses, the more endowed with potency for evil, even down to those pathogenic germs of such infinitesimal minuteness as not yet to have been revealed to the highest powers of the microscope but known to exist as the cause of disease and pestilence by the reliable deductions from analogy and *a priori* reason. As it is written, "God hath chosen the weak things of the world to confound the things that are mighty, and base things of the world, and things

which are despised hath God chosen, yea, and things which are not to bring to naught things that are."

If we are constantly exposed to so many and great perils where no danger signals heretofore cognizant to our senses have forewarned us, and especially where we have looked for only beneficent relations and contributions to man's comfort, how practically important does all knowledge on the subject become, that man may in time learn to detect them and thus be enabled to protect himself against these unseen dangers.

Because of its practical importance, I have chosen for the subject of my paper, "The Danger of Infection from Cow's Milk," regarding the paper as in some sort, a continuation of the subject and an addendum to a paper read by me last winter before the academy of medicine of this city, entitled "Cow's Milk and Typhoid Fever." As such, I shall feel privileged to refer to some of the facts and conclusions contained in that paper.

In it, I make mention of the fact, that Mr. Ernest Hart, editor of the *Journal of the British Medical Association*, has given in tabular form, particulars of ninety-one recent epidemics due to infected milk that have been recognized and made the subject of detailed observation in Great Britain alone. These were, more especially, epidemics of typhoid fever, scarlet fever, diphtheria and erysipelas. This catalogue by no means embraces all the indictment which may be charged against the cow, as we might fairly include in it tuberculosis, vaccinia, apthous sore mouths, gastro-intestinal catarrhs, cutaneous eruptions in children, ephemeral fevers and some intestinal parasites. But this is, I suppose, enough to show that fresh milk of the cow is a more suitable culture medium for a greater variety of pathogenic germs than all other known media except it be the vital fluids of the body.

In that paper I have also given the history of an epidemic of typhoid (enteric) fever with details of the individual cases which occurred at Wyandotte from July 15 to about November 1, 1890, eleven cases in all traced to this source, with two deaths. This outbreak was traced conclusively to this source by such facts as these: that all the families in which these cases occurred were using this milk; that many other cases of indisposition were occurring in other members of the same families; that cases continued to occur so long as this milk was used, and disappeared on discontinuance of its use; that in one family in which a fatal case had occurred having been persuaded afterward by an irregular that the milk was innocuous, return to its use was followed by two more cases of great severity, and that none of the families were using the water of the well from which the cow was contaminated, and finally by confirmation of this conclusion by the following results of bacteriological analysis by Professor Vaughan, at Ann Arbor. The chemical analysis of the water of the well which was highly contaminated is not here given.

BACTERIOLOGICAL EXAMINATION OF MILK FROM MILLSPAUGH'S COW.—Number of germs (pathogenous) developed on a gelatin plate inocculated with one drop of the well water, after twenty-four hours, 2430; with the milk, 3460.

This local epidemic, it is safe to say, must have cost the five families involved, in loss of time and expenses, not less than one thousand dollars, and this is an example of what is continually occurring in different localities, from what the advances of medical science ought to make preventible causes of disease.

This Wyandotte cow, though failing to successfully emulate in distructiveness the Chicago cow of conflagration fame, and thus make herself a name in history, nevertheless justly attained to considerable local celebrity.

The following is the history in brief of a more recent but similar outbreak of typhoid fever occurring on Grosse Isle during the summer of 1891: June 16, I was called to Anthony Lafayette, a young man in service of Mr. Alexander in Grosse Isle. He had been sick several days. Found a case of typical malignant enteric fever. For sufficient reasons ordered that he be conveyed to a hospital in Detroit, where he was taken and died after about one week. About June 28 was called to see Robbie Alexander, aged nine. He had a moderately severe run of typhoid fever lasting twenty-one or twenty-two days. August 12 was called to see Percy Moore, aged thirteen, in immediately adjoining house, whose fever also ran about three weeks. And August 17, five days afterward, his mother and a younger brother, Harold, aged nine, were down, all of which cases ran their course in from three to four weeks. In the meantime two children of Mr. Reynolds, a neighbor were ill of a fever. They were under the care of a physician from this city, Dr. Andrews. They ran their course to convalescence in about the usual time—three to four weeks. During this period of illness of Robbie Alexander his father and a young lady of sixteen in the family were very much indisposed and ailing. Mr. A. in particular, a very healthy man, was troubled greatly with headache, vertigo and general malaise.

August 19 it was learned that all these families were supplied with milk from a cow of Mr. Alexander which had no access to the pure water of the river but was getting her drink from a nearly dried up swamp in the island. This milk supply was interdicted with no more cases occurring and speedy recovery of the other ailing members of the families. No opportunity was had for a bacteriological examination of the milk as it was during the summer vacation of the university. I may remark that one of the Reynolds children, on the change of milk being made, without any knowledge of the fact on her part, remarked, "Why, how much nicer this tastes than what you gave me before."

In the paper previously referred to, in answer to the question I have prepared, "Why does typhoid fever prevail more in the fall and winter months than in spring and summer?" I have remarked, "that if the germs are received by the cow in its food or drink there is an obvious reason why this should be more likely in the fall and winter than in spring and summer. As the grass dries up and the green food disappears with the summer and autumnal heat and drouth the cattle presumably require more water than when supplied with abundance of succulent green feed; and it is just at this time the wells become low, the ditches dry, the ponds stagnant and contaminated with the decaying growth of the summer.

But this Grosse Isle outbreak makes its appearance early in the season while the grass is yet green and abundant, and ordinarily, the wells and ditches and swamps yet full of water—facts in apparent contradiction of the above theory. But now mark how the real condition and facts tend to confirm it.

Grosse Isle, ever heretofore, had been notably free from fevers. The swamp in the interior has in former years had an abundant supply of pure water from its intake from the Detroit river, as also a free outlet into the same body on the opposite side of the island some miles further down. During the past season

particularly, the level of the lakes and the river has been so low that this intake has been cut off and its scant supply has been only by reason of the occasional temporary rise of the level of the river by strong northeasterly winds, so that the condition of the little water it contained was practically that of the foul ditches and stagnant ponds of autumn.

In both of these recorded epidemics of typhoid from the use of cow's milk, fortunately, in each case, the milk supply was from a single cow and it was possible to know as to the animal's food and drink and general management. In the former case the animal had been kept in the barn, stall-fed, for many weeks, possibly all summer. Her water was from a well the condition of which was very foul, and the chemical and bacteriological condition as shown by Dr. Vaughan's analysis was perilously polluted.

Observe, then, the severe penalty exacted for the careless disregard of the animal's requirements and the lesson taught of the importance of proper hygienic care as regards pure water and food even for the dumb brute.

Sometimes the lesson is taught us, of the necessity of looking to the milk supply for the causes of other ailments and disorders, as in the case of Mr. Reaumes family, also of Grosse Isle. His children lived principally on milk. All the family had aphthous sore mouths and were more or less feverish. The father had occasion to take a drink of the milk they were using. He noticed an unpleasant taste and inspecting it more closely saw that it was not natural in appearance. The use of the milk was discontinued with rapid recovery of all the sufferers. The cow was hurried off to the *butchers*.

In view, then, of this proved fact of cow's milk *in the bag* being so unequalled a culture medium for such a variety of pathogenous germs and so favorable a vehicle for conveyance of infection, it seems to me reasonable to suspect that it may be the source of the infection not only in many epidemics of these diseases, but also of sporadic and isolated cases which cannot be traced to personal exposure, to contagion; and especially so in regard to sporadic cases of typhoid fever.

It is not necessary for us to suppose that in all such cases of infected milk, that all who use it should become infected, more so than in the use of polluted water, or in cases of personal exposure to contagion. There is not the same susceptibility in all, no susceptibility in some in any case, the same individual may be susceptible at one time and not at an other. This susceptibility may be acquired by some casual lowering of vital power of resistance to noxious germs as by cold, fatigue or depression arising from other causes, or the germs themselves may be endued with greater or less virulence of toxic action at different stages and conditions irrespective of the host or recipient. All this would only be in accordance with analogies in the laws governing germination and propagation in higher realms of nature.

Again, the probability of milk being the source of the infection in certain cases, will more satisfactorily account for some other phenomena better explained on that hypothesis than any other, namely, such as the intercurrent appearance of another and distinct infectious disease in one member of a family where others are sick with typhoid fever. As for instance, the father and mother and one or more children in the Kaulpp family, of Ecorse, were ill with a severe type of enteric fever and during this illness, soon after its outbreak, another

child sickened and died of malignant diphtheria, within forty-eight hours. I have known a number of similar instances of diphtheria appearing in other members of a family where there were or had recently been typhoid fever. In explanation it may be said that a variety of pathogenous germs have been found in the same sample of milk and of water. I do not know that those of diphtheria have been so found or looked for with others. What we do know is that milk has been the carrier of the contagion of diphtheria. And again, some members of the family may be more susceptible to the toxic action of one species than of others.

As having a certain amount of interest in connection with this subject, allow me to make a brief quotation from a paper published by the writer in the July, 1862, number of the *American Journal of Medical Sciences*, entitled "Epidemic Relationship of Zymotic Diseases," to-wit: "Observation seems to have determined conclusively that there exists a certain relationship between some diseases of an epidemic character. Inquiries in relation to the etiology of epidemics tend greatly toward proving the fact of the unity of zymotic diseases in their origin or epidemic cause. It has been observed that certain epidemics either prevail together or follow each other with such uniformity and regularity that the conviction of their being the result of something more than mere accident is irresistible; that there are indeed definite laws governing these phenomena; and it is more than probable that these laws when known, will point out to us, not the pathological identity of these diseases, but an identity of epidemic cause."

This was written thirty years ago, but two hundred years ago Sydenham must have remarked something of the same kind which he seeks to explain under the formula of the "Epidemic Constitution of the Atmosphere."

How beautifully our modern advances in the knowledge of the microbic pathology or etiology of these diseases, and of the character, habitat and mode of conveyance of some of these germs, explain phenomena in regard to which our fathers and even we elders in the profession groped in darkness in seeking some explanation. These facts also are a fair illustration of the development or evolution, if you prefer the term, of scientific truths in medicine.

What, then, is the conclusion of the matter? How have we benefitted by this advance in our knowledge as regards infectious diseases? As to therapeutics, little, perhaps; as to prevention, immensely. No doubt lives were saved by the comparatively early discovery of the source of the two outbreaks of typhoid fever here detailed. That such knowledge will correct other outbreaks is certain. But what we want is an easy practicable chemical test for determining the purity and freedom from microbic contamination of our water and milk. Give us this, we crave you, chemists in charge of hygienic laboratories. And until this can be done, let us call upon the state to put in the power of the state board of health, or better yet, of local boards, to have such chemical and bacteriological examinations made when necessary that the public may be guarded against the dangers of such disasters.

And yet there remains the solution of a more important problem. If we are contaminating our drink and our food so far as this is supplied to us in the milk of the cow, and thus introducing pestilence and death, this involves the necessity for a radical change in the methods of disposal of the sewage of towns

and cities. No citizen would be allowed to drain his privy vault into his neighbor's well. This is virtually what modern methods of disposal of city sewage amount to, emptying it into the stream from which each lower city, town or village must draw its water supply.

In conclusion, cow's milk has been shown by many writers, undisputably, to have been the source of infection of many epidemics, notably of typhoid fever, of scarlet fever, of diphtheria, and of erysipelas. If it has happened to one member of this society to have traced to this source, within a little more than one year, two local epidemics of typhoid fever in separate localities and originating from the milk of different animals—and intercurrent cases of diphtheria may have originated from the same source,—then, how many epidemics in the aggregate have had a similar origin; and how many of the sporadic cases of these diseases, and especially of scarlet fever and of diphtheria which are always among us, are originating from this source?

THREE CASES OF SUPPOSED STRANGULATED HERNIA.

By J. S. WIGHT, M. D., Brooklyn, New York.
PROFESSOR OF OPERATIVE AND CLINICAL SURGERY AT THE LONG ISLAND COLLEGE HOSPITAL.

The question of diagnosis is always important to the surgeon; it may now and then be one that is difficult to answer; and an error may lead to consequences that are more or less serious. These statements are not new, but they will bear repetition. It is not expected of the surgeon that he will never make a mistake: he is required to use only ordinary skill and care. If he has more than ordinary skill, he had better use it. These points may be illustrated by the report of three cases of supposed strangulated hernia.

Case I.—E. H., a laborer, aged forty-four years, was sent to me at the college hospital, January 22, 1892, with a painful swelling on the left side in the region occupied by femoral hernia. The swelling had existed for nearly a week, and was said to be due to an irreducible femoral hernia that had become strangulated and inflamed. On examination I found the following points: A firm circumscribed swelling in the region of left femoral hernia existed having the signs of inflammation; there was no impulse on coughing; there was no obstruction to the bowels; the general condition of the patient was not such as we would expect in a case of inflamed strangulated hernia. It was deemed advisable to make an exploratory operation, in order to determine the nature of the case, and then proceed upon the knowledge obtained. After anæsthesia, I made an incision into the swelling through the most prominent part, and found evidence of suppurative inflammation, but not the usual appearance of the tissues in a case of strangulated hernia. Slowly dissecting down, I found an acute adenitis, with a pus cavity; there was considerable periglandular inflammation, which had been increased and extended by severe efforts in making taxis; there was no evidence of there ever having been a hernia, either femoral or inguinal. I evacuated the pus; scraped out the pus cavity; disinfected the wound of operation; then I packed the opening with antiseptic gauze. This patient was treated antiseptically, and was discharged from the hospital February 8, entirely recovered.

Case II.—F. Z., aged seventy-one years, was sent to the college hospital, February 16, 1892, in order to have an operation for strangulated inguinal hernia which existed on the right side. The history was that the hernia had come down from time to time for several years, and had often been reduced by the family physician, and now and then by the patient himself. At the time he was sent to the hospital the hernia, it was said, could not be reduced, inasmuch as it had become strangulated. I saw him soon after he came into the hospital, and on examination found a hard elongated swelling in the right inguinal region extending into the scrotum, and appearing to be connected with some nodules felt in the abdominal cavity. There was no impulse on coughing; there had been some vomiting; there had been more or less constipation; the indurated mass was certainly irreducible; there was considerable local tenderness; the patient was very feeble and was emaciated. While I did not regard the case as one of hernia, still it was possible for me to be mistaken as to the existence of a hernia in connection with the mass of induration. The only reasonable and practical conclusion that I could reach was that an operation ought to be performed, just as if it were a case of strangulated hernia. The patient bore the ether well during the entire operation. Upon dissecting out and exposing the mass of induration, I found its structure contained several moderate sized pus cavities which I opened. There was a tubercular enlargement of the spermatic cord, involving the right testicle, and extending up into the abdomen. The diseased structure was brought down as far as possible, and ligated in two parts with a piece of strong catgut, and then removed; the testicle was also removed, and the scrotum scraped out. There was not the least evidence of the existence of a hernia discovered; perhaps there never had been any hernia. It is possible that there might have been a more or less diffuse hydrocele of the spermatic cord; and it might have been the fluid of this that was reduced from time to time. This patient failed slowly, and died on the 29th of February from exhaustion.

Case III.—E. Mc. R., age twenty-four years, was brought to the college hospital, February 22, 1892, by his family physician. He had a considerable swelling in his right inguinal region, and was supposed to have a hernia. After taxis the swelling was reduced in size, and the doctor thought that some portion of the contents of the sac had returned to the abdominal cavity. When I saw the patient the case presented the following signs: There was a tense fusiform swelling in the left inguinal region along the seat of the spermatic cord; it extended from the testicle to the external ring, where it quite abruptly ceased; no impulse was communicated to it when the patient coughed; there had been no obstruction of the bowels, and the patient had not vomited; the enlargement had existed for some time, although there had not been any evidence present of inflammation. The case had many points which suggested the existence of hydrocele of the cord. In any view, it was a case for operation, whether it was a hernia, a hydrocele of the cord, or both of these conditions combined. After an anæsthetic, I cut down on the swelling and found a fusiform swelling of the spermatic cord, whose walls had become much thickened, and which had a small cavity containing a sero-purulent fluid. I ligated the cord as high up as possible, without opening the abdominal cavity, and removed it along with the testicle which was involved in the disease. The disease was cystic hydrocele of

the spermatic cord, of tubercular origin, perhaps beginning in the testicle. The wound of operation was left open and treated antiseptically. This patient did remarkably well, and was discharged from the hospital March 21, having entirely recovered. No sign of the existence of hernia had been discovered; if he had a hernia before the operation, there was certainly a complete radical cure.

Remarks.—In operating upon these cases, I proceeded as if they had been cases of strangulated hernia. To have done otherwise would have been to neglect proper precautions, and might have imperiled the lives of the patients. There are no circumstances or conditions in which the surgeon has a right to be reckless; nor can he safely ignore the opinions of his professional bretheren, for they may be right and he may be wrong. A mistake from such a source cannot be creditable to the surgeon, nor to the profession which he represents.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MAY 16, 1892.

THE VICE-PRESIDENT, B. P. BRODIE, M. D., IN THE CHAIR.

EXHIBITION OF SPECIMENS.

DR. IMRIE presented a lipoma, the size of a fist, removed from the vulva of a woman forty-five years old. The growth had existed twelve or fifteen years.

DR. CARSTENS: There is a very hard lump in this tumor that should be examined microscopically to determine whether there is any malignancy about the growth.

DR. T. A. MCGRAW presented a very large tumor removed from a woman's thigh. It had existed for fourteen years and up to two years ago showed no signs of malignancy whatever. Two years ago it began to grow and involve the surrounding tissues and when we came to remove it, the lymphatic glands, skin, and other tissues, were found to be thoroughly infiltrated with black melanotic tissue. To such an extent were they infiltrated that it was found impracticable to remove all the affected parts. Here was a tumor existing for twelve years and not showing any signs of malignancy. Still it was a melanotic sarcoma, the most malignant of all tumors. This should impress upon us the fact that all tumors, even fatty, are important, and show a loss on the part of the economy of that physiological function whose duty it is to remove all useless tissues. After the teeth are removed the alveolar processes becoming physiologically useless are absorbed. If we keep a joint persistently at rest, the synovial membrane becoming functionally useless is absorbed and the muscles atrophy. These are instances of the physiological action in the body that removes all useless tissue, therefore, any tumor being a useless tissue, its existence is evidence that this physiological function is in abeyance.

DR. LONGYEAR presented a fibroid polypus or uterine myoma, removed through the cervix. The patient from whom it was removed is the mother of sixteen children and is forty-nine years old. This tumor first showed itself four years

ago after the birth of her last child and was partially removed at that time by her then attending physician. I removed it entire by the ecraseur. The right horn of the uterus where the tumor was attached was beginning to invert, it was easily replaced.

DR. MULHERON reported a successful ovariotomy in a patient seventy-five years old, the ovarian cyst weighing twenty-six pounds. The temperature was never elevated above 100° Fahrenheit.

DISCUSSION OF PAPERS.

DR. E. P. CHRISTIAN read a paper entitled "Milk as a Vehicle of Infection." (See page 337).

DR. CARSTENS: I have seen three or four cases of typhoid in the last year in consultation, and all these have been traceable to drinking well water. Everything that is eaten should be subjected to a high enough temperature to insure the death of all morbific germs.

DR. J. FLINTERMANN: The paper is a very timely and interesting one and a decided revolution has been going on in the medical mind as to the etiology of zymotic diseases, and all the points which have been brought out are not theoretical but practical, but it is within our own recollection when the general medical profession was wont to cast slurs upon the workers in this field. DR. CHRISTIAN shows that the course of disease can always be traced to its source. A great step is made in advance! The local board of health has been hampered in its efforts to prevent the spread of disease. When this subject was brought up in this society the voice of its members was not unanimous, nevertheless the medical profession as a whole is far ahead of any other body of men in efforts to protect the public. Many years ago when puerperal fever was so prevalent the profession was not unanimous as to its etiology and prevention, but now we recognize the etiology of the disease and can easily limit its propagation. I congratulate the doctor on his advanced views.

DR. CARL BONNING: My experience has been in line with DR. CHRISTIAN'S paper. Scarlet fever has been in my experience carried to six families by one milkman in whose house there was a case of scarlet fever. I was once called to the country to see a patient whom I found suffering from typhoid fever. Some weeks later I was called to see a child in the city who was also suffering from typhoid fever. I was at a loss to account for this last case until I finally found that the former, whose house I had visited in the country, was supplying this family with milk. The infected milk supply was cut off and no further cases occurred. Milk should always be boiled before being consumed.

DR. F. L. NEWMAN: Last fall I was called to the families of two milkmen living in the country in adjoining houses. The stock of these milkmen drew their water supply from the same well. I found several cases of typhoid in these families. Later on I was called to three families living in the city and all taking milk from the two milkmen above referred to and found several cases of typhoid in each of these families.

DR. G. H. SHERMAN: Butter may also spead the typhoid fever as well as milk.

DR. LONGYEAR: I am very much interested in the paper because it deals in a practical way with a practical subject. People should be educated in some way so as to bring this important subject to their notice. No doubt milk is

largely responsible for the spread of disease. The board of health should be empowered and instructed to act in this matter in such a way as to bring all milk under their supervision. In Detroit, that gets its water supply from a running stream, milk is a very important medium of infection. I would be glad to see the state or local board empowered to analyze all milk supply.

DR. T. A. MCGRAW: Other methods of infection than through milk have been touched upon by DR. CHRISTIAN which are particularly interesting from a surgical stand-point. I refer to the spread of infection by flies. In the army the spread of hospital gangrene was supposed to have been through the medium of flies and insects. In the Chatanooga hospital all such cases were isolated in the gangrene ward. All surgeons and nurses in attendance visiting these wards were prohibited from visiting other patients. Nevertheless, gangrene did appear in sporadic cases and the only source of infection that could be thought of, was, that the contagion was conveyed by flies. Small-pox and other diseases may be so conveyed and very practical results may be arrived at in the prevention of these insects carrying the contagion to other patients. Perhaps typhoid may not be but I believe small-pox may be so conveyed.

DR. J. J. MULHERON: I think that many of the points brought out by DR. CHRISTIAN are not generally recognized. Scarlatina is particularly liable to be conveyed by milk. the milk absorbing the element upon which the contagion depends be it gas or germ. It is a new idea to me that the cow will propagate these diseases from the udder, but DR. CHRISTIAN'S cases show certainly the possibility of this direct propagation. But the direct propagation of typhoid fever through this source he does not fully prove. While DR. CHRISTIAN'S statistics are in the direct and proper line of investigation and in the main are good, more evidence must be adduced before we can accept the theory as he advances it. We understand that typhoid fever is an intestinal disease and that the alvine dejections are the sole carriers of the infection. If this be so we would hardly expect the cow's milk to progagate the disease. We know that milk does convey the infection of scarlatina, but in the case of typhoid fever we need more evidence. DR. CHRISTIAN'S paper is a timely one and he has struck the key-note of investigation which should be carried out in the lines he has laid down. In Detroit we have been floundering around and the line of investigation which the doctor has indicated has not been sufficiently carried out.

DR. CARSTENS: The germs are eliminated by Peyer's patches and if the cow drinks them why could they not be eliminated by the milk?

DR. CHRISTIAN: In my experiments the milk was taken directly from the cow in sterilized bottles and sent sealed to Professor Vaughan for analysis. There were three samples sent. One of milk, one of water from the penstock, and one of well water. One drop of each of these was allowed to rest in gelatine twenty-four hours, at the end of which time one thousand five hundred germs were found in the river water, two thousand four hundred and fifty in the well water, and three thousand four hundred and fifty in the milk. Typhoid fever is very rarely found on Grosse Isle because the people drink the surface water which does not contain any of Detroit sewage. Wyandotte, on the other hand, gets its water from the bottom of the river, thereby receiving the full benefit of the city sewage.

DR. F. W. ROBBINS: Was the distinct germ of typhoid fever found?

DR. CHRISTIAN: No! but this was variously explained by Professor Vaughan, he advancing the theory that the germs that were found might develop into the typhoid germ at the temperature of the body.

DR. BRODIE: I wish to tender the thanks of the society to DR. CHRISTIAN for his able paper. All his statements are based upon actual observation backed up by the experience of other men and as such are particularly valuable.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, MAY 23, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. E. T. TAPPEY presented a bladder and prostate gland showing great hypertrophy of the prostate. The middle lobe of the prostate which had been so much enlarged as to render the introduction of a catheter difficult had been removed by supra-pubic cystotomy some two or three days before. The patient died. Treves speaks of the supra-pubic operation as very successful. The patient had been brought to the hospital because he could not pass his water. He was relieved by supra-pubic puncture. The removal of this very much hypertrophied middle lobe left a very large absorbing surface. Patient died of septicæmia.

DR. DONALD MACLEAN exhibited: (1) An appendix vermiformis removed one week ago. The history of the patient being as follows: Last September he had an attack of severe pain in the abdomen, accompanied by chills and fever which by the attending physician was looked upon as peritonitis. He made what seemed to be a perfect recovery, but two weeks ago he was taken with pain, rapid pulse and fever. At first the symptoms were not very active, but a week ago he became tympanitic, his tongue became furred and his disease took a decidedly active course. There was distinct swelling in the usual region of an appendicitis. An operation was immediately recommended. With great difficulty the patient's consent was obtained. The operation was done one week ago to-day. A large amount of fœtid pus and an ulcerated appendix were found and removed. The patient is doing well. (2) An appendix vermiformis removed this morning from DR. C. J. LUNDY. This is a very important and interesting pathological specimen. DR. LUNDY presented the following history: Last summer he had an attack of what was said to be peritonitis from which he never perfectly recovered, but until two weeks ago his disease presented no active symptoms. Upon his return, two weeks ago, from Flint he was seized with a violent chill and great pain in the abdomen. So great was his pain that opiates had to be freely used. At a consultation between DRS. WALKER, IMRIE, FLINTERMANN, and myself, tumefaction with fluctuation was made out in the region of the right kidney. The operation was performed at 11 A. M. to-day. Enlargement and fluctuation were found under chloroform. A small exploring needle was first employed but no pus was found with it. Incision was made down into the swelling, and a large quantity of very thick and very fœtid pus was evacuated. The usual operation for appendicitis was then done and the organ was thoroughly removed together with all the pus. Looking at the specimen we see that

the free end was very much enlarged while an ulceration with perforation was easily found near the base.

DR. H. O. WALKER: DR. LUNDY did have appendicitis some time ago. The great question to decide is, When should we operate? In the first case which DR. MACLEAN reports no question could be raised as to the advisability of an immediate operation, but there are many cases presenting the symptoms of local peritonitis, the high fever, etc., in which the question of immediate operation is an important one. I recall many cases in which it seemed absolutely necessary to operate and still the patient made a good recovery without operation. There was no time in DR. LUNDY'S case at which a surgeon would have been justified in strongly urging an operation. The great question of when to operate is still unsettled. Many cases do recover when they are not operated upon.

DR. FLINTERMANN: The question of diagnosis is an important one. In DR. LUNDY'S case, at our consultation, we were not able to arrive at a minute diagnosis. The examination did not accurately locate the disease. The pathological specimen shown to-night explains the symptoms as they occurred. The position of the perforation high up will explain the apparent perinephritic location of the abscess. DR. LUNDY'S pain came on suddenly. He had an attack similar to this two years ago which was followed by symptoms of hepatic disturbance such as jaundice and clay colored stools. The diagnosis is difficult to make and the time for operation is very hard to determine. An operation should always be done, and if done antiseptically, the chances for recovery are very good. It is not a good thing to wait too long. It is very hard to tell in doing the operation whether you are intra- or extra-peritoneal on account of the tissues being matted together by an inflammatory exudate.

DR. CARSTENS: Did you examine the liver?

DR. WALKER: We did not make a laparotomy.

DR. DONALD MACLEAN: The subject of appendicitis, and the question of when to operate, are new. Statistics are accumulating and we are not in a position to be dogmatic in our statements. The question of operation is influenced somewhat by circumstance. Hospital surgeons can act as they like but there are cases in actual practice in which we cannot obtain the consent of the friends to operation and if we did operate we would be laying ourselves open to unjust criticism. I have in my mind at the present time a case presenting all the evidences of perityphlitis or appendicitis but this patient had an exceedingly delicate constitution and considering all the surroundings I did shrink from operating. The patient gradually got well. From the stand-point of a pathologist or a hospital surgeon, MCBURNEY'S idea of immediate operation is all right theoretically but cannot always be followed out practically in private practice.

DR. G. E. FROTHINGHAM: Last March DR. LUNDY told me that an operation had been suggested to him some time ago but that he had declined it. His recovery at that time was apparently complete and it seemed that this recovery was incompatible with the idea of there having been pus in that region. As yet there is not evidence enough to warrant us in making rash operations. The position of the focus of inflammation is not easily made out and another thing which renders our position a delicate one is the variability of the anatomical distribution of the part. Which plan of treatment gives us the best chances of success is the important question. Many cases do get well without an operation.

Whether or not these early operations are advisable is a question. But when well advanced and pus is actually demonstrated an operation is undoubtedly the correct thing.

DR. H. O. WALKER: I fully agree with DR. FROTHINGHAM here because we have so many cases of perfect and permanent recovery without an operation. The anatomical distribution of the part is variable. Pain was, in DR. LUNDY'S case, high up which accounted for our miscalculation.

DR. C. G. JENNINGS: DR. MCBURNEY'S very sanguine statements account for DR. FLINTERMANN'S remarks, but my own experience is that many of these cases get well without an operation. The diagnosis of this disease is not so very difficult because pathological movements in that locality almost always have the appendix as their focal point. MCBURNEY'S pathological investigations have fully proven the appendix to be as much the focal point of inflammations in this locality as the tubes are known to be the focal point in pelvic troubles.

DR. CHAS. DOUGLAS: DR. JENNINGS' remarks might be misconstrued. We see cases of constipation in which the cæcum is filled up and we have tenderness about it. These cases must be discriminated from cases of appendicitis. Such cases as these yield readily to mild catharsis. I now call to mind two such obscure cases which had become thoroughly and permanently well under this line of treatment. In another instance a young man had been down with several attacks of what seemed to be appendicitis—an operation has been suggested to him and he refuses. He is still doing his work and occasionally has attacks of pain in the iliac region. In another case a man ten years ago had swelling in this region and several attack which laid him up in bed. About a pint of pus was drawn off by the aspirator. The opening thus made remained patulous and pus discharged for two months. He got thoroughly well and is to-day a strong and healthy man.

DR. CARSTENS: The question of the necessity of operation depends upon the manner in which the appendix is inflamed. If the lumen of the appendix is pervious it may get well of its own accord by discharging into the bowel, but if the communication with the bowel be cut off by adhesive inflammation the pus will burrow out and you will have a large abscess. In the latter case removal of the pus by operation is the only thing that will do the work. Conservatism is not a desirable thing. It is not responsible for any of the steps we have made in advance. It is not to conservatism that we owe the rapid strides which modern surgery has made. I would like to call the society's attention to the fact that we often hear of the cases that recover without operation, but nobody says anything about those cases that die because they are *not* operated upon.

DR. FROTHINGHAM: Conservatism means a securing of the best chance for your patient's life. In my opinion many cases would have died had they been subject to a rash operation. I think we go too far when we say that an early operation is always the best thing for our patient. Other parts as well as the appendix may be inflamed, the inflammation extending by continuity of tissue, and in these cases we do not remove all the inflamed tissue. True courage will enable a man to stand by and let the patient have the best chance of recovery. If I myself had an appendicitis, I would hestitate long before submitting to an operation unless the presence of pus were very certainly demonstrated.

DR. FLINTERMANN: All cases do not get well from delay. There is a danger

in letting these cases go too long. I know of many cases that have been delayed and lost. When suppuaration is present you *must* operate.

DR. DONALD MACLEAN: The question at issue is not Should we operate if pus be found (because of that there can be no question)? but the important point is, Shall we operate merely because the appendix is inflamed? That is the question. In other words, Shall we operate upon every case of appendicitis.

DR. G. E. FROTHINGHAM: When pus is found we should of course operate, but we should not operate upon all cases of inflamed appendix.

DR. FLINTERMANN: All cases of appendicitis will finally run to the formation of pus.

DR. DONALD MACLEAN: DR. FLINTERMANN just said that we should not operate until pus is found.

DR. FLINTERMANN: When we have true appendicitis we always have pus.

DR. CHAS. DOUGLAS: We do not always have the appendix closed up because we have appendicitis. Many times the pus will find its way into the bowel. After attending a case for some time the patient passed from my hands because I wanted to operate. Finally the sac found an exit into the bowel, the pus was discharged into the bowel and the patient got well. When the growth of the abscess is slow and not endangering the life of the patient we are justified in awaiting developments. DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE PHYSIOLOGY OF SLEEP.

THE nature of sleep is a physiological puzzle, which is responsible for a greater confusion of ideas than that which pertains to the original problem. The conception of the fundamental antithesis of soul and body probably first arose out of the experiences derived from the sense of sleep. The desertion of the body by the ego during sleep largely determined the character of primitive conceptions regarding a mental self. Indeed, there are not lacking speculators who still rely upon sleep as indicating the extrinsic existence of a spiritual self which withdraws from the organism at this time. To what region this spirit, which they identify with consciousness, retires these speculators give no clue, except to say, that it probably goes to the region from whence it comes.

To treat of mind as other than an internal existence is a task that may reasonably be relinguished to the transcendental physiologist. Semi-spiritualistic interpretations of biological problems will probably be accorded little attention while so much scope exists for legitimate inference regarding actual vital phenomena.

Dr. Emmanuel Rosenbaum, of Berlin, furnishes us with the newest view of the nature of sleep. His notion is essentially a modification of the opinion of Preyer, which held sleep to be caused by the products of decomposition, lactic acid and creatin, taking up the oxygen of the blood. Rosenbaum, observing the periodicity of all organic tissues, how alternations of work and repose are the invariable rule, conceives sleep to be the alternate condition of cerebral activity, or as Foster years ago expressed it, "sleep is the diastole of the cerebral beat."

Sleep, according to Rosenbaum, is owing to the used up materials of the nervous tissues being replaced by water. This increase of watery substance in the nervous tissues ensues as a normal result of the activity of the cerebral molecules. This water, which takes the place of the nerve-substance, is expired principally during sleep. Excess of water in the brain-substance, therefore, induces sleep, and Rosenbaum endeavors to show, how in conditions of coma, the nervous matter becomes softer and more watery in consistence. The irritability of the nerve cells is diminished as water is substituted for their proper substance.

The analogy between the sleeping and waking brain, and the systole and diastole of the heart is sufficiently striking to suggest that the events which determine the rythmic rise and fall of cerebral activity may closely resemble those which operate in producing the phenomena of the cardiac cycle.

EDITORIAL BREVITIES.

MODERATE DRINKING.

Dr. Farquarson, in *Blackwood's Magazine* for June, braves the storm of prohibition sentiment by extenuating the excuses usually offered for refusing to sign the pledge. While admitting that all stimulant is unnecessary for people living perfectly healthy lives, as well as for the young, he maintains that there are few persons beyond middle life who are not placed beyond physiological condition, and a little alcohol helps them to round the corners and plane away the asperities of existence. The argument in favor of alcohol seems to his mind to be complete: when prudently used it does good and can do no harm; when abused it is like anything else—bad.

THE MEDICINAL VALUE OF ALVINE DEJECTIONS.

From the days of Pliny, and probably long before, the dejections of almost every animal have been considered to be endowed with medicinal virtues. Dog-dung with honey was a remedy for sore-throat. Lion-dung was an anti-epileptic. The dung of the Grand Lama of Thibet is still made into pills, and is used largely at the present day as an infallible remedy for many diseases. The virtues of this remedy are of an occult kind, and the material is procured with solemn ceremonial observances. The Grand Lama poses as a sacrificial priest, and offers his dejections to a suffering world not simply as excrement but as a symbol of some divine emanation.

A NEW THEORY OF URIC ACID.

Sir William Roberts, in his first Croonian lecture, points out certain considerations which give rise to the idea that uric acid in mammalian urine may be in the nature of a vestigial feature, analogous to the vermiform appendix, the ductus arteriosus, or the ear point, structures of ontological significance only. Uric acid in the mammalian urine is to be regarded as a "memory" of some ancestral form which eliminated its nitrogen as uric acid. Vestigial structures are notable for their inconstancy, and the extreme inconstancy of uric acid both in regard to its presence and amount in different individuals coincides with this feature of vestigial structures.

MEDICAL NEWS.

DUBLIN rotunda hospital will be enlarged.

ALUMINIUM is now used for physicians' signs.

THE death is announced of Professor Meynert, of Vienna.

THE London hospitals are crowded with scarlet fever cases.

VACCINATION is compulsory throughout the Turkish empire.

DR. ROBERT KOCH is said to have married a popular danseuse.

DR. EDWARD S. SNOW, of Dearborn, a pioneer physician, died July 18.

A BIOGRAPHY of Dr. D. Hays Agnew is being prepared by Dr. J. Howe Adams.

DR. EDWARD SLOMAN, formerly of Detroit, was drowned at Omaha, July 14.

EUCALYPTUS HONEY is the latest remedy for phthisis. It is an antiseptic honey.

A FOUR YEARS' COURSE.—Harvard medical school has adopted a four years' course.

THE city hospital of Saint Louis is likely to have a new operating amphitheatre.

DR. W. W. JONES, of Toledo, Ohio, is dead. He was a pioneer physician of that city.

ONE of our contemporaries is publishing the advertisement of a Keeley institute.

DR. HENRY L. JOY, an old practitioner of Marshall, Michigan, recently died in that city.

DR. DONALD MACLEAN was married in New York, June 30, and subsequently sailed for Europe.

SMALL-POX prevails in Mexico. Three hundred cases have been reported in the city of Mexico.

THE second meeting of the international dermatological congress will be held in Vienna, September 5 to 10, 1892.

THE annual receipts of the American medical association are thirty thousand four hundred and sixty-eight dollars.

DRINK AND CRIME.—In England crime has decreased while the drink-bill has increased eight millions of dollars a year.

THE *Medical News*, of Cincinnati, has been discontinued, owing to the death of its publisher and editor, Dr. J. Thacker.

A CRUEL form of capital punishment in China consists in artificially keeping the culprit awake till he dies of starvation.

MR. HENRY A. RILEY, of New York City, a well-known writer on medical law, recently died in that city, of heart disease.

PROFESSOR JOSEPH JONES, M. D., of New Orleans, had the degree of LL. D. conferred upon him by the university of Georgia at its recent commencement.

THE Mississippi Valley medical association will hold its eighteenth annual session at Cincinnati, October 12, 13, and 14, 1892.

A POST-GRADUATE school has been organized at Albany, New York. It will be known as the Sydenham post-graduate course and hospital.

MARC JUNEAU, a French demi-mondaine of Guayaquil, Ecudor, is said to have given birth to seven children at a birth, all living and healthy.

MEDICAL BILLS.—Under a recent decision, medical bills in Michigan do not have a labor status entitling them to first lien in case of bankruptcy.

CANINE TUBERCULOSIS.—Rechet and Hericourt report the immunity of dogs from human tuberculosis by previous inoculation with the tuberculosis of birds.

IN Russia all second-hand goods placed on sale must be disinfected. The law requires that the article be provided with a label testifying to the act of disinfection.

THE DISPENSARY. ABUSE.—Four hundred and forty-two thousand cases were treated gratuitously in New York City hospitals during 1891, or nearly one-third of the population.

AT the recent meeting of the Mississippi state dental association resolutions were adopted urging the creation of a department of public health and the passage of the pure food bill.

GLADSTONE'S DIGESTION.—Mr. Gladstone's vigor is attributed to the fact that he chews each bolus of food thirty-two times. This is said to be by actual count, and confirmed by re-count.

THE physicians of New York now number six thousand six hundred and fifty-one practicing in the city and state. Two thousand four hundred and thirty-five practice in New York City.

DETROIT COLLEGE OF MEDICINE.—Extensive additions are being made in the buildings, with a view of providing ample accommodation for the pharmacy, dentistry and veterinary departments.

THE American college fraternities will expend twenty thousand dollars in displaying their valuable historical collections at the world's fair. The exhibit will be made in the liberal art building.

THE tri-state medical association held its regular meeting in Quincy, Michigan, Tuesday, July 12. A large list of papers was submitted and the proceedings were of a satisfactory and edifying character.

ON his seventieth birthday Virchow received a gold medal weighing nearly six pounds. It is pronounced the largest one ever made, the metal alone being valued at one thousand seven hundred and fifty dollars.

THE New York legislature recently enacted a law to protect the people of that state from quack dentists. It requires registration with the county clerk, thorough preparation for future dentists, and sanction of their fitness by the board of censors of the state dental society. Violation of this law is punishable by a fine of fifty dollars for the first offense, and one hundred dollars and imprisonment for each subsequent offense.

THE MEDICAL PROFESSION IN JAPAN.—There are thirty-eight thousand six hundred and twenty practitioners of medicine in Japan. This with forty millions population gives one physician to each one thousand and thirty-five inhabitants.

THE TREATMENT OF RHEUMATISM.—A tour of the Paris hospitals revealed that all the physicians used salicylate of soda in the treatment of acute rheumatism. The dosage varied considerably. Soda bicarbonate and antipyrine were also largely used.

HEPATIC TERMINOLOGY.—Dr. Ferrier, of Paris, recently read a paper on the surgery of the liver. Here are a few of the words he used: hepaticostomy, hepatostomy, cholecystostomy, choledocholithotripsy, cholecystenterostomy, and cholecystolithotripsy.

DANGERS OF EXCESSIVE WATER-DRINKING.—Four unknown persons living in Paris recently betted among themselves as to which would drink the largest quantity of water. One drank twelve litres, another nine, a third seven. All three died a few hours afterward.

THE Barnes medical college is the latest accession to Saint Louis medical colleges. It would be interesting to know just how many medical colleges Saint Louis possesses. The Barnes hospital is also to be erected and endowed out of a sum of money left by the late Mr. Barnes.

THE WOMAN'S HOSPITAL, DETROIT.—The new hospital was opened July 9. The building is modern in all its arrangements. The charity is an extremely deserving one, and it is hoped the new hospital will receive substantial support. Dr. H. W. Longyear is the chief of the medical staff.

A JUICY HOSPITAL.—At Saint George's hospital, London, the cost of each bed occupied is four hundred and ten dollars per annum. The value of the alcohol consumed was at the rate of sixteen dollars per annum for each bed. At Guy's hospital the alcohol per bed only amounted to three and a half dollars per annum.

THE difference between drunkenness and inebriety is stated by M. Trelat thus, says an exchange: "Drunkards are people who drink whenever they find an opportunity for drinking; persons affected with inebriety are diseased, and drink only when the attack seizes them." Drunkenness is a vice; inebriety is a disease.

DOCTOR OF PHARMACY is a new degree created by the university of Munich. It will be conferred on students who have attended school seven semesters, and passed a satisfactory examination in one principle subject, chemistry or botany, and in three secondary subjects, mineralogy, physics, and zoölogy; provided an inaugural dissertation is also presented.

NEW YORK CITY has a summer corps of physicians numbering about fifty. They began work July 5 and are to serve for two months at a salary of one hundred dollars per month. Their duty is to visit the tenement houses and minister to the destitute sick who are unable to employ a physician. They are required to devote eight hours to professional work each day.

AN ANCIENT DEFINITION.—In an "English Expositor" which, the preface says, was begun by Dr. John Bulloker, is found the following: "Apoplexy: A Disease that suddenly deprives one of Sense or Motion. It cometh for the most Part of cold and grose Phlegmatic Humours, oppressing the Brain in such Sort, that the animal Spirits can not pass from thence into the Sinews, as they ought to do."

THE *National Popular Review* is the title of a new monthly journal devoted to preventive medicine and applied sociology. The first number is an exceedingly interesting one and deals with important problems in a plainly-worded way. The editor is Dr. P. C. Remondino, who is already well-known as a scribler who wields an interesting pen. It is published in San Diego, California, by J. H. White.

THE death of Sir William Aitken occurred on June 27. He was one of the best known of the medical officers of the English army, and for a number of years was professor of pathology in the army medical school at Netley. He was the author of a well-known and deservedly popular text-book on the theory and practice of medicine, and was a member of many British and Continental medical societies.

THE militia surgeons of Canada have formed an association. They organized with twenty charter members, the following officers being chosen for the ensuing year: Honorary president, Surgeon-General Bergin; president, Surgeon F. W. Strange; vice-presidents, Drs. Moore, Roddick, Connell, McGillivray, Jenkins, Orton, and Duncan; secretary, Surgeon G. Sterling Ryerson, of Toronto. Appropriate papers were read and discussed.

THE KEELEY CURE IN ENGLAND.—The promoters of the million dollar gold company in England, nearly succeeded in inveigling Bishop Barry, the chairman of the Church of England temperance association into presiding over a meeting to extol the Keeley fake. Dr. Norman Kerr and other well-known students of inebriety, however, saved the bishop from occupying the grotesque position assumed by Dr. Talmage, in his recent formation of an unholy alliance of medical and religious humbug.

THE Langenbeck house, which is the name of the new medical building at Berlin, was recently opened with appropriate ceremonies. It contains a lecture theatre with seven hundred seats, where Siemering's bust of Langenbeck is to be placed, a room for meetings arranged for several hundred persons, a fine reading-room, an elegant *foyer*, which is to be ornamented by the bust of the late Empress Augusta (the gift of the emperor), and by life-size portraits of the present emperor and empress; rooms for scientific collections, etc. The entire cost of the building, including site, has been five hundred and fifty thousand marks twenty-seven thousand five hundred pounds. The *Deutsche Medizinische Wochenschrift* has published a special surgical number in honor of the inauguration of the Langenbeckhaus. Among the contributors are Czerny (Heidelberg), Trendelenburg (Bonn), Schede (Hamburg), Kümmel (Hamburg), and their papers are followed by reports from the surgical clinics of Berlin, Marburg, and Kiel.

RECENT PUBLICATIONS.

REVIEWS.

THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM.*

THE commoner forms of nervous diseases are treated of in the present volume in an elementary manner, but with sufficient fulness to make the work useful and popular. The aim has been to simplify the difficulties attendant upon diagnosis. The various chapters deal with the structure and functions of the nervous system, the symptomatology of nervous diseases, localization of the lesion, the diagnosis of its nature, the diagnosis of different types of disease and the distinctions between functional and organic diseases. The book is concluded by two very useful chapters on the examination of the patient, and illustrations of diagnosis. The author draws a sharp line of distinction between traumatic neuroses and hysterical manifestations, fully in harmony with all that has recently been established in this direction.

Students and practitioners will find Dr. Herter's book readable and instructive. It can be commended as a reliable guide in the matters of which it treats.

*A manual for students and practitioners. By Christian A. Herter, M. D. Cloth. Six hundred aud twenty-eight pages. Price, $3.00. G. P. Putnam's Sons, New York.

MANUAL OF SKIN DISEASES, WITH SPECIAL REFERENCE TO DIAGNOSIS AND TREATMENT.*

THE manual of skin diseases prepared by Dr. Hardaway is one of the most practical volumes of its kind ever issued from the press. It is arranged on a very convenient plan, and the introductory remarks alone are of the highest value. The skin diseases proper are arranged alphabetically and therefore permit of easy and rapid reference. So far as our examination of the work has gone, it will be found sound and reliable as a guide to the diagnosis and treatment of skin diseases.

* For the use of students and general practitioners. By W. A. Hardaway, M. D., professor of skin diseases in the Missouri medical college, and in the Saint Louis post-graduate school of medicine. In one small octavo volume of four hundred and forty pages. Cloth, $3.00. Lea Brothers & Company, Philadelphia, 1891.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.*

THE fifth annual series of the annual of the medical sciences has been presented to the profession. As each new series appears, the need of introducing it to professional readers becomes less. It is now so well known that its appearance is anxiously awaited. All that has been said in favor of the annual in previous years, can be repeated of the present series. The scheme of it is admirable and should receive the hearty support of all medical journals, whose contents it seeks to preserve wherever they may seem worth preserving.

The annual has not yet reached the point of excellence the editor says he

hopes it may some day attain, but as it is now well nigh impossible not to find in it something about everything, there must of necessity be a limit even to the improvement that can be made in it.

The annual will continue to be as indispensible to the medical reader as it is to the medical writer.

*A yearly report of the progress of the general sanitary sciences throughout the world. Edited by Charles E. Sajous. Seventy associate editors. Illustrated. The F. A. Davis Company, Philadelphia.

DISEASES OF THE NERVOUS SYSTEM.*

Not as a substitute for the more elaborate treatises upon nervous disease, but as an introduction to their study, Dr. Ormerod provides this excellent manual. It is well written, amply illustrated, and entirely free from the obscure explanations which so frequently vitiate books of this kind. The division of the subject as indicated by the captions of the different chapters, is on a plan well adapted to the student, and the scheme of the book unfolds itself in a rational and easy way.

Dr. Ormerod has provided an excellent manual either for the student or practitioner,—one which deserves to be widely read.

The illustrations are excellent and the topography is an example of Messrs. Blakiston's best work.

* By J. A. Ormerod, M. D., F. R. C. P., demonstrator of morbid anatomy, Saint Bartholomew's hospital, London. P. Blakiston, Sons & Co., Philadelphia.

CEREBRAL MENINGITIS.*

The author presents a brief treatise on the various forms of meningitis, supplementing the views of standard authorities with certain impressions of his own. The book is essentially a compilation, and judged from that stand-point is a fairly good one.

* By Martin W. Barr, M. D., Philadelphia. Physicians' leisure library series. Cloth, fifty cents; paper, twenty-five cents. Geo. S. Davis, Detroit.

REFERENCES.

BOOKS AND PAMPHLETS.

"Thirty-two Unselected Abdominal Sections." By Thomas Opie, M. D., Baltimore.

"Cases of Gall-bladder Surgery." By Robert Abbe, M. D. Reprinted from the *New York Medical Journal.*

"Medical Education and Legislation." By Geo. J. Engelmann, M. D., Saint Louis. Reprinted from the *Medical Fortnightly.*

"A Clinical Report of the Operate Surgery in the Service of Dr. W. T. Bull, New York." D. Appleton & Company, New York.

MEDICAL PROGRESS.

MEDICINE.

THE USE OF HYPNOTICS AMONG THE INSANE, WITH A REVIEW OF THOSE CHIEFLY EMPLOYED IN AMERICAN HOSPITALS FOR THE INSANE.

ALTHOUGH this subject is of special interest to those having practical relations with the insane, it will also perhaps be of interest to the general practitioner, because to him at times comes the responsibility and care of these unfortunate cases. Moreover, it is of the utmost importance that the insomnia of nervousness, incipient insanity or the first stages of decided mania or melancholia should be controlled by the best means which experience has pointed out.

In our opinion drugs are far more frequently resorted to for the purpose of inducing sleep than they should be, and not infrequently do they do positive harm in the treatment of insomnia. Many milder measures should first be tried whenever possible. Some of these are hot douches or baths followed by brisk rubbing with coarse towels, hot nutritious drinks at bedtime, care of the diet with proper stimulation in asthenic cases of mental disease, hot applications of the spine followed by galvanism of the spine, and many others of similar nature. At present, however, we have in mind cases in which these means have failed and in which drugs must be tried.

Although so much valuable work has recently been performed both in the discovery and clinical application of new hypnotic substances, the evil of the day seems to be that they are used without proper regard to their specific actions. The error is a most natural one in the case of all new medicaments. Naturally, one wishes to experiment with them with the hope that at last the *ideal* hypnotic has been evolved from the crucible or still; yet after all we know that as far as the insomnia of mental disease is concerned we possess no one drug that is applicable to all cases, but that several drugs do exist which when properly used with due regard to their actions go very far towards affording us a specific. With the advent of each new hypnotic a vast wave of experimentation has swept over this country, and it is only when they have passed and broken that we are beginning to appreciate the proper places of these substances in their class. The enthusiasm with which such hypnotics as paraldehyde, sulphonal, chloralamide, etc., were received showed itself in the many papers that were published in our medical periodicals, full of unstinted praise to the favorite of the hour; but now the wise hand of Time has kindly modified many of these first impressions, and shown us both the virtues and faults of these various agents. This, however, is but partially true, for the greatest difference of opinion exists regarding some of them, and, if we are to place confidence in the published results, the greatest variance exists in their clinical effects when employed by different men. This being the case let us briefly review some of these drugs as intelligently as the diverse opinions will admit.

Before considering separately the most commonly used hypnotics it may be well to briefly refer to the indications for their employment in cases of insanity. These indications may be roughly grouped and summarized as follows:

(1) In acute mania, acute delirious mania, acute epileptic mania before or after fits, and in the acute maniacal stages of general paresis or chronic mania. In these cases they are indicated to lessen motor and cerebral activity, to prevent exhaustion, to conserve the strength and to promote recovery when possible. It is in these states that hypnotics are urgently demanded, and are of the highest importance if sleep can be induced.

(2) In the noisy states of chronic mania, late stages of general paresis and in the restlessness often attending convalescence from acute psychoses.

(3) In the insomnia of acute and chronic melancholia for the purpose of aiding by rest the recuperative powers of the system. Here is it most important that the hypnotics employed leave a minimum of depressing after-effects, and also that they do not disorder digestion; otherwise they are better omitted from the treatment.

(4) In alcoholic insanity, periodic and circular insanity, and in primary or terminal dementia. The beneficial actions in these conditions being to quiet motor excitement and control the patient, as well as to obtain sleep with its good effects.

These are the chief indications which present themselves among the communities in American hospitals for the insane; for which every known remedy has been from time to time employed. It would be useless and beyond the scope of this mere sketch of an important subject to quote extensively from the voluminous literature respecting the several drugs to be alluded to, so that we only endeavor to offer certain facts which are of attested value:

(1) *Sulphonal.*—This drug has been extensively tried since its discovery by Kast. It has been used in the insane by Cramer, who had "positive success" in ninety-two cases, with no instance of any unpleasant after-effects; by Schwalbe, who reports success in sixty-six per cent. of his cases; by Rabbas, who used it over two hundred times with "good effect." Papers have been written in praise of it by such authorities as Ziemssen, Kast, Engelmann, Oestreicher, Schotte, Schmey, Frankel, Mathes, Salgo, Rosenbach, Rosin, and others abroad, while in this country we have the contributions of Flint, Wetherill, Sachs, Wilson and Hutchison, Griffith, C. M. Hay, J. G. Kiernan and many others.

Much difference of opinion exists at present concerning the value of this drug. There can, however, be little doubt of its efficacy in cases of insanity, although its slowness of action is a disadvantage to its use in acute cases. It is chiefly beneficial in cases of simple mania, mild restlessness, excessive "nervousness," and in all cases in which simple insomnia is to be overcome. It is practically useless in cases wakeful from pain, fever, cough, etc. In certain forms of light melancholia, and in the excessive nervous insomnia of alcoholism it is one of the best remedies, when it is well borne by the stomach. No better way has been found to give sulphonal than that suggested by Kast—in a half cupful of tea or light broth two or three hours before its effects are desired.

Jastrowitz, in a paper read before the Berlin medical society, places sulphonal second in the point of safety in therapeutic doses, chloral being in his opinion entitled to first place in this respect. He also thinks it the least efficient of all hypnotics, and liable to cumulative action. The experience in this country is against the conclusions of Jastrowitz, and the drug is being extensively used in cases of insomnia which do not demand a stronger remedy. It has been found

repeatedly to produce sleep when other hypnotics have failed, but on the other hand in the experience of nearly everyone it is often uncertain in its action. There can be no doubt of its occasional toxic effects, which may be due to the slowness of its excretion, as well as to individual idiosyncrasy. The chief symptoms of poisoning are: mental torpidity, muscular weakness, giddiness, feeling of oppression in the head, cardiac weakness. These symptoms should always be a warning to stop the drug, since they may readily deepen into dangerous and fatal effects. Sulphonal acts best when given in a single large dose, which, at the beginning, should not exceed fifteen grains, and where it is to be employed continuously it is wise to allow frequent brief intermissions so that a possible accumulative action is avoided.

(2) *Paraldehyde.*—This drug is exceedingly valuable in the insomnia of mental diseases, because besides its hypnotic action it is a circulatory stimulant and can freely be given in cases of cardiac weakness. Its disagreeable taste, the odor it leaves upon the breath for ten to eighteen hours after its administration, and its tendency to disorder digestion are its chief disadvantages. It is nevertheless, in our opinion, one of the most serviceable of all the hypnotics used in insane hospitals. It can be employed continuously for a long time without serious effects, although some rare cases of paraldehyde habit have occurred. Out of the many hundreds of cases in which we have seen this drug employed, only one case of paraldehyde habit has occurred, and that was due to an improper use of the remedy before the patient came under observation. It is more widely applicable to the insomnia of insanity than almost any other drug, and may safely be given in doses of two fluid drachms, and even as high as a half an ounce in severe cases of sthenic mania. It is, however, chiefly of service in the milder forms of mania, and in melancholic states, except when employed in conjunction with remedies to control higher degrees of motor excitability. Owing to its excessive pungency it should be given well diluted, so that the stomach may be as little irritated as possible. In epileptic mania it has been found very valuable, and has even been employed as a remedy for epilepsy and the status epilepticus by H. B. Williams, assistant physician of the Arkansas insane hospital.

(3) *Amyl Hydrate.*—This substance has been extensively used in the same kinds of cases in which paraldehyde is of service, but speaking generally it is inferior to it in its results.

(4) *Hyoscin.*—This is one of the most valuable drugs when it can be had pure. It is speedily useful in mild cases of insomnia, mania with insomnia, and great restlessness, and may be given in small doses continuously in certain forms of cerebral excitement, such as frequently occurs in the initial stages of general paralysis of the insane. In the wild frenzy of acute mania, it is also of great service in quieting motor activity and thus conserving the vital forces of the patient. Its disadvantage is its action upon glandular activity by which it injuriously affects nutrition.

(5) *Hyoscyamine.*—The literature on this drug shows that it is extremely valuable in controlling motor excitement, but of less value as a hypnotic. The amorphous alkaloid is the more frequently employed, and has been given with benefit to acute maniacs in the stage of wild, uncontrollable excitement in doses of one-fifth of a grain hypodermatically. Reports from various asylums confirm this practice, and it would appear that such doses are exceedingly well-borne in

the condition above named. Owing to the marked gastro-enteric disorder occasioned by the remedy it cannot be given continuously in chronic cases, and its chief value is to tide over the height of an attack of acute maniacal excitement, in whatever mental disease this condition may occur. Some writers have cautioned against its use in patients with feeble hearts, while others do no intimate trouble in this direction. Our experience in its employment in cases of mania has been that it acts promptly and satisfactorily when given to allay motor excitement with delirious mental exaltation.

(6) *Morphine.*—The use of morphine in mental disease seems to be, judging from the available evidence, chiefly of value in melancholic states and as a soporific. Where there is a physical cause such as pain, cough, dyspnœa, etc., for insomnia aside from melancholia in any case, it is perhaps our best remedy, provided it is administered without the knowledge of the patient that he is taking it. The danger of establishing the morphine habit in these cases must be sedulously guarded against. Morphine is of comparatively little use as a hypnotic, except in combination with other drugs, such as chloral or the bromides. When given in asylum practice it is usually administered in hypodermatic form.

(7) *Chloral.*—Probably no drug is more extensively used as a hypnotic, anti-spasmodic and depressant than this. Among the insane it is commonly employed, often in combination with the bromides, to produce sleep in all cases where no contra-indication to its use exists. In the status epilepticus it has been found the best single remedy, and in such cases is usually administered by the rectum. From what is known of its physiological action upon the cortical cells of the brain it is probable that the sleep produced by chloral is nearer natural sleep than that induced by any other hypnotic. Its disadvantages are its depressant effects on the circulation, the necessary increase of the dose to maintain good effects, and the danger of the chloral habit.

(8) *Chloralamid.*—This substance, which is intended to replace chloral, has been the subject of extended editorial notice in the issue of the *Reporter* of March 5, to which the reader is referred.—*Medical and Surgical Reporter.*

THE INSENSIBILITY OF WOMEN.

Professor Cæsar Lombroso contributes to the *Fortnightly Review* an article on the insensibility of women, in which he reaches some rather novel conclusions. Professor Lombroso states that accurate studies as to the relative sensibility of woman as compared with man have never been made. He has himself tested the delicacy of the sense of touch, pain, general sensibility (whatever that may mean), smell, and taste in one hundred women and men. He finds that the tactile sense in men, as measured by the æsthenometer, averages about one and six-tenths millimetres, in women of the lower classes, it is two and six-tenths, of the higher classes two millimetres. The sense of pain, tested by the electrical algometer, is in young men sixty-four, in older men seventy-eight millimetres; in young women fifty-three, and in older women seventy millimetres. In other words, the sensibility to touch and pain is less in women. Smell and taste are rather keener in women. He does not speak of those most important of all the senses, sight and hearing. Lombroso states that he has

been informed by surgeons that women show greater insensibility and less shock from the pain of surgical operations. Their lesser degree of sexual sensibility is generally admitted; their inferior moral sensitiveness is accepted as a fact by Lombroso. It would probably be denied by most women, as well as by many of their chivalrous if not scientific admirers. The supposed lesser sensibility of women is thought to be one reason for their greater longevity.

The data obtained by Lombroso are of value, and will be taken for what they are worth. They are certainly insufficient to prove his case. We fancy that the general experience of physicians is rather against the view which he takes. It is an unquestionable fact that women suffer on the average more pain than men. Neuralgias and headaches are two or three times more common, sensory neuroses predominate in the female sex; motor neuroses in the male. Women bear certain kinds of suffering better than men; they are more patient in invalidism; partly because it brings to them the solicitude and attention which their nature craves. That they feel the pain less, or bear the infliction of pain more stolidly on this account is rather doubtful.

Professor Lombroso has, however, opened up a very interesting field of inquiry, and one which deserves more careful and exact investigation than it has yet received.—*Medical Record.*

SURGERY.

IDEAL DRESSING FOR ABDOMINAL WOUNDS.

THE author has for two years past used a dressing which hermetically seals the wound in a thin layer, with certainty preventing the invasion of pathogenic organisms from without. This dressing is easily made, simple, and always satisfactory. After closure of the incision, the skin, the line of the wound, and the sutures are dried, and two layers of sterilized gauze or cheese-cloth, large enough to project five to ten centimetres (two to four inches) beyond the incision on all sides, laid on the skin. This is saturated with the following adhesive mixture, which is evenly distributed over the whole surface.

℞ Squibb's ether, or washed ether, and alcohol, absolute, equal parts.
Bichloride of mercury (Merck's recryst.) enough to make the solution . . . . . $\frac{1}{16000}$
[Anthony's] Snowy cotton, enough to make a syrupy consistence, added in small pieces, stirring.

As soon as this is poured over the wound evaporation begins to take place at once, and the celluloidin hardens, gumming the gauze fast to the skin. To avoid delay in waiting for this to grow quite hard, and to prevent adhesion to the cotton applied above it, the whole surface is freely dusted over with a finely powdered mixture of iodoform and boric acid: one to seven.

The wound thus sealed with celluloidin gauze may be left untouched for a week or more, when the dressing should be softened with water, or more rapidly with ether, the gauze lifted off, and the stitches taken out.

If there are any signs of suppuration, as evidenced by pain, local tenderness

and redness, associated with elevated temperature, the dressing should be removed earlier and the discharge of the stitch-hole abscess promoted in the usual way.

Sufficient cotton may now be heaped upon the abdomen to pad out the inequalities for the application of the bandage. Common cotton may be substituted for absorbent and prepared cotton, by simply sterilizing it in the Arnold steam-sterilizer.—H. A. Kelly, M. D., in *American Journal of Obstetrics.—Annals of Surgery.*

SOURCES OF SYPHILITIC INFECTION.

Dr. Rassler, in his essay for the M. D., of the university of Kiel, makes a valuable contribution to the literature of syphilitic disease. The *Archiv für Dermatologie und Syphilis* states that Dr. Rassler undertook the labor of analyzing six hundred and thirty cases of syphilis treated in the medical clinic with the object of ascertaining the number arising from extra-genital infection. He found thirty-four such cases, comprising twenty-three of the lips, one of the tongue, two of the mucous membrane of the mouth, and three of the mamma. In three instances the primary sore occurred on the genital organs without connection having taken place, and in the remaining two it was impossible to indicate the locality. The result of these investigations shows that five per cent. of all cases of syphilis are due to extra-genital infection. According to other authorities, the proportion varies between one and ten per cent. except in certain parts of Russia, where the proportion is said to reach as high as eighty or ninety per cent.—*Saint Louis Medical and Surgical Journal.*

URINARY INFECTION.

After an able historical discussion of this subject, Hallé (*Annales des Maladies des Organes Genito-urinaires*, Ann. X, Number II) arrives at the following conclusions, which he believes to be justified by modern research and experimentation:

(1) That the sole causes of urinary infection are microörganisms.

(2) That the mode of infection, in the vast majority of cases, is through the urethra, and may be either spontaneous or surgical, while there are a few authentic cases of infection through the circulatory system.

(3) That the necessary condition for infection, after the introduction of the microbes, is the retention and stagnation of urine in the bladder, where it forms a perfect culture medium, and that, therefore, the least retention of urine is a real danger.

(4) That the pyogenic action, where no traumatism exists, is secondary and only possible after certain species have produced a catarrhal cystitis through their power to render the urine alkaline, but that where a traumatism is present others may cause suppuration without alkalinity of the urine.

(5) That systemic urinary infection may be either ascending or descending, and is microörganic; in the ascending the infection is by continuity of structures, the ureters and pelvis of the kidney being involved, while abscesses are found in the pyramidal substance; in the descending the infection is embolic,

and due to the presence of the pyogenic urinary microbes in the blood, the only lesions being the multiple military abscesses in the cortical substance, due to emboli, the pyramids and pelvis of the kidney as well as the ureters remaining inact.

(6) That variations in the intensity of the infection are to be explained by the greater or less virulence of the infecting microbes, and the condition of the patient; and the apparent immunity from systemic infection in some cases, he believes to be due to what might be called an autoinoculation by an attenuated virus.—*American Journal of Medical Sciences.*

INDICATIONS FOR THE DISCONTINUANCE OF THE MECHANICAL TREATMENT OF HIP-JOINT DISEASE.

Prolonged treatment seems necessary in the majority of cases. Tubercular lesions of the joints are not easy to control, and repair takes place very slowly once the cartilage is gone and the bone is fairly attacked, or when there is a lesion at the epiphyseal line. Recognizing these points fully, we may state that if there is pain referable to the joint lesion, if manual concussion to the heel produces pain or flinching, if there is considerable deformity without ankylosis, if there is a true joint limp, or if there are abscesses or sinuses connected with the joint, we are not justified in discontinuing mechanical treatment. Or if there is reflex muscular spasm, limiting joint movement slightly in all directions; if there is almost perfect flexion of the joint, with the other movements considerably or markedly limited; if flexion and abduction and adduction are excellent, with rotation and extension limited; and, finally, if all the movements of the joint, except rotation inward during flexion, approximate the normal, there is almost a certainty that mechanical protection is necessary. Of course, it is understood that the limitation to motion above referred to is occasioned by the neuro-muscular protection peculiar to the disease. Not that it necessarily follows that an active tubercular process exists; but, if too much liberty is given the joint under the circumstances above named, ordinary use of the joint becomes a traumatism, and a relapse, especially as to deformity, is almost sure to occur. This relapse may occur in a few weeks or months, or may be in a few years.—N. M. Shaffer, M. D., in *New York Medical Journal.*

THERAPEUTICS.

CHLORALAMID: ITS ACTION BASED ON A STUDY OF TWO HUNDRED AND EIGHTY CASES.

In giving an opinion of the value of a drug, and in this case of a hypnotic, it is necessary to be particularly careful, as there are so many known and unknown factors which combine to produce the somniferous state, that it is often difficult to determine which adverse element to its enjoyment is antagonized by the medication used. Again, the organism may be abnormally susceptible to or against certain physical agents, so that we have in different conditions different procedures in accomplishing a state of physical and mental

relaxations at our command. These may be drugs, different temperatures, electricity, or even suggestion.

The compound which is the subject of this paper acts by virtue of its power to quiet the irritability, normal or otherwise, of certain nervous centres, and to induce a condition which we term sleep.

Chloralamid, or more properly chloralformamide, is, therefore, a pure hypnotic. The drug is a chemical union of chloral anhydride with formamide. It is soluble in water (ten to fourteen parts*) and alcohol (one to one and one-half parts).

When introduced into the alimentary canal it is quickly absorbed and passes into the general circulation where it is gradually broken up with the liberation of chloral. The existence of free chloral in the organism would, if in sufficient quantities to produce hypnotic effects, lower the cardiac and respiratory action by direct effect on the ganglia governing these functions, which is not to be desired in many cases. When in combination with the formamide, as in this drug chloralamid, these functions of the medulla are stimulated, and the depressing influences of chloral counteracted.

The effects of this drug on the nervous system other than the production of cerebral anæmia—sleep, and the lessening of irritations to a certain degree, are practically *nil.*

Its influence on respiration is decided. In ordinary doses it stimulates the respiratory centre and greatly depresses it in toxic quantities—death resulting from paralysis of respiration and not from cardiac failure as in chloral poisoning.

The sphygmographic tracings show that the blood pressure practically remains uninfluenced except just before death, when it is diminished about nine-tenths of the total pressure; this seems to be from cardiac enfeeblement rather than from any influence on the vaso-motor system.

Slight influence, if any, is exerted on digestion, temperature, appetite or secretion of urine.

The chief therapeutic indication for the employment of this drug is in diseases, organic and functional, where hypnotics are required for insomnia, except when it is the result of great mental excitement or pain, and even in these cases it will often ameliorate the condition. It is especially useful in the insomnia from high arterial tension in Bright's disease. Its range of usefulness is therefore very large, for insomnia is a very distressing symptom of a large number of disease-processes.

Its stimulating effect on respiration would specially indicate its use for the night-sweats of phthisis. The depression following this condition does not seem to be due to the sweating *per se*, but rather to the effects of a gradual increase in the quantity of carbonic acid gas in the blood incident to the difficult interchange of gases from the pulmonary lesion. In phthisis, when the daily exertion from excessive coughing or other physical causes more than exceeds the supply of energy and nutrition which can be furnished by the body, the respiratory centres are greatly depressed, and not so quickly stimulated by a quantity of carbonic acid gas in the blood which ordinarily would effect them. The

* While chloralamid may dissolve in ten to fourteen parts of water under manipulation and after considerable time, it is safer to use twenty to twenty-five parts of water—always cold, never hot.—Editor.

sweat centres are not affected by the physical causes, and respond to the stlmulation of the increased amount of carbonic acid and pour forth their secretions abundantly. A respiratory stimulant would combat this functional perversion, and as this kind of a therapeutic agent we can recommend chloralamid.

When the drug is given for its hypnotic effect its physiological action is noticed in from thirty to ninety minutes, and the sleep induced lasts from five to nine hours, is natural and refreshing and not followed by any unpleasant sequelæ. No symptons of cerebral congestion or any unpleasant sensation in the head or other parts of the body are experienced. No evil effects followed the continued use of the drug for ten days, and during this time it was not necessary to increase the dose, nor was its hypnotic effect diminished. Any psychological influences can therefore be eliminated. There is no cumulative action of the drug, nor are there any cases on record where a habit has been formed. The best time for administering the drug is just before retiring. It can be given in capsule, dry on the tongue, as an enema, or preferably in solution. As palatable a combination as one could wish is the following, which will be found useful in private practice. It is a pleasant mixture with a slightly acid taste:

℞ Chloralamid, ... ʒij
Tr. Cardamom Co., ... ʒi
Misce bene et adde
Syr. Aurantii.
Syr. Rubi. Idæi., ... āā ʒss
Misce et Sq.: From one-half (½) to one table-spoonful repeated.

The dose which yields the best result is from thirty to forty-five grains. Not more than one hundred grains should be given in twenty-four hours.

The conclusions, based upon its use in two hundred and eighty cases, are briefly as follows:

That it is a most useful hypnotic, reliable, safe, and pleasant.

That it has a place as an anhidrotic in phthisis.

That it is superior to other drugs because in hypnotic doses it stimulates respiration, and but slightly, if at all, influences pulse, temperature, or urinary secretion.

That no collateral symptoms of any consequence exist.

That the best hypnotic dose for an adult is forty grains.

That it is given preferably in an alcoholic solution just before retiring.—James Wood, M. D., in *Brooklyn Medical Journal.*

THE NEW SALTS OF CALCIUM IN THERAPEUTICS.

Professor See (*La Medicine Moderne*), in a long address before the academy of medicine, endeavors to prove the great superiority that the halogen salts of calcium have over those of potassium and sodium, and over the ordinary preparations of lime. His conclusions are stated as follows:

(1) To introduce lime in the most satisfactory manner into the system the salts of calcium, the bromide, and especially the chloride of calcium, which contains more than a third of calcium, should be prescribed. The usual preparations of lime are uncertain, because they are absorbable in the smallest quantity only. They are eliminated in very minute quantity by the kidneys, proving that

they have been present in the blood in very small amounts, while the great bulk of them passes unchanged through the intestines without producing any effect.

(3) The iodide and bromide of calcium are the salts which are specially indicated when we desire to produce the effects of iodine and bromine on the economy. The amount of iodine and bromine in them is larger than in any other salt, while the calcium contained in them has neither the active, and often injurious, effects of potassium, nor the inactivity of sodium.

(3) The bromide and chloride of calcium are very serviceable in many cases of dyspepsia and of gastric affections.

(4) It is, moreover, the calcium which acts favorably upon the stomach when the iodide of calcium is substituted for the iodide of potassium. Both these drugs have a very happy action on the respiration, on the heart's action, and on specific complaints; but the iodide of calcium, of which the dose is smaller, is well borne by the digestive organs, while potassium is manifestly prejudicial to them. While each of the halogen salts of calcium have a special indication of their own, they have also a common indication in gastric therapeutics. This remarkable property is maintained by them all.—*International Medical Magazine.*

NOTES ON THE TREATMENT OF DIPHTHERIA BY HYDROGEN PEROXIDE.

THE object of this paper is to give a concise account of several cases of diphtheria which have been treated by hydrogen peroxide, and to set forth the various reasons, both practical and theoretical, why this agent is a valuable one when applied to the treatment of diphtheria.

Hydrogen peroxide acts very energetically upon dead and decaying animal tissue, yielding up its oxygen and deodorizing the decaying tissue. Likewise does it act upon all purulent discharges, the disengaged oxygen forming a foaming lather, as can be seen after it has been applied to the diphtheritic membrane.

A great many substances have been used for the purpose of dissolving the membrane of diphtheria. Hydrogen peroxide accomplishes this purpose very readily, and at the same time it has an inhibiting action upon the germ, and purifies the parts affected. Many of the other agents which have been used for the purpose of softening the membrane lack the power of destroying the germ; herein lies the virtue of hydrogen peroxide, for it not only dissolves the membrane, but it is antiseptic.

Tannin has been used as an application to the diphtheritic membrane, but it hardens the membrane, and is not, therefore, a useful drug. The hardening of the membrane prevents the subsequent application of other remedies; a thick crust is formed, and the drug which is afterward applied cannot reach the seat of the morbid process. Hydrogen peroxide softens and dissolves the membrane, and it does not preclude the simultaneons use of other drugs. For this reason it is more valuable than other agents.

Hydrogen peroxide has other advantages over the various drugs which have been used as topical applications to the membrane of diphtheria,—namely, it causes no irritation whatever; it is colorless, odorless, tasteless; it causes no pain, and it does not interfere with digestion.

There are two theories which have been advanced in regard to the origin of

diphtheria,—one which supposes the morbific element to be a gas, and the other looks upon a microbe as the cause of the disease. The microbe is now very generally accepted as the exciting cause, and the theory that a gas is the exciting cause is looked upon as a matter of "ancient history." That the foul gas arising from bad drainage bears an important relation to the production of the disease there is no doubt, but it is a predisposing cause, and not the specific element. These gases depress the mucous membrane, and render it a suitable nidus for the development and growth of the germ, which is the exciting cause. However, concerning hydrogen peroxide, it matters little which of these theories you accept, for it is indicated in either case. It will alter, purify, and disinfect the gas of the one, and destroy the microbe of the other.

There are several methods employed in the application of hydrogen peroxide, but any means which the ingenuity of the physician can devise will answer the purpose. It can be applied with a probang or swab, but the spray and gargle are probably the best. Inhalations and hypodermic injections have been resorted to, but without any benefit, because the blood cannot take up more oxygen than is present in the atmospheric air, as has been clearly shown by physiological investigations. Hydrogen peroxide has been given internally for the purpose of acting upon the blood, five to twenty drops of a ten per cent. solution being used. It does not interfere with the action of digestive ferments, such as pepsin, and it does not, therefore, interfere with the digestive process.

The drug should be used early in the course of the disease, in order to prevent thickening of the membrane, for when the membrane becomes thickened its resisting power is increased. Another reason why it should be used early is, that it prevents the membrane from spreading downward into the glottis and upward into the nares. The spreading of a membrane downward into the larynx is a very serious consequence, because it is very inaccessible in this location.

It is important that we should here consider the frequency with which hydrogen peroxide should be used. The drug should be applied every hour, and, better still, every half-hour, for the germs are reproduced very rapidly,—every twenty minutes, it is said. The bacilli of diphtheria are a form of the schizomycetes, and they multiply by fission,—that is, one divides into two, two into four, four into eight, etc.,—and in a very short time a large colony of germs is formed. Therefore, it is necessary to use the drug frequently to prevent the formation of new colonies, which would be a product of, possibly, a single germ which was left undestroyed.

Diphtheria has been treated by hydrogen peroxide alone, and good results have been reported, but it would hardly be wise to depend upon local treatment, for diphtheria soon becomes a constitutional disease, characterized by local manifestations, and the poison is circulating in the system. It may seem that a discussion here of the use of other drugs is rather foreign to this paper, as the paper is intended to show that hydrogen peroxide is indispensable in the treatment of diphtheria, but hydrogen peroxide will not prevent the paralyses which occur as sequelæ, which are as dangerous as the disease itself. Tonics must be given freely during the disease, whiskey, iron, and quinine being the most efficient, and strychnine should be used in convalescence. The use of hydrogen peroxide is entirely local as a disinfectant, deodorizer, and antiseptic, and it acts as a solvent to the membrane.

Case I.—A. F., aged twenty. This case was seen very early, at the time of the onset, and from the beginning hydrogen peroxide was freely and frequently used, both as a gargle and a spray. The membrane did not spread, bled very little on picking, and was discharged in large lumps in the saliva without a trace of blood. The patient had no difficulty in swallowing at any time.

Convalescence was rapid, which is contrary to the general rule, and the patient, without the knowledge of the physician, left her bed, walked to the railroad station (a distance of one mile), and died suddenly of cardiac failure. The moral of this case is, that absolute rest is necessary, although the local symptoms were so much modified by the use of hydrogen peroxide.

There is no doubt concerning the diagnosis of this case. The characteristic membrane on the tonsils and pharynx, the sudden onset of the disease, and the resulting cardiac failure make it clear.

Case II.—This case was not seen until the membrane had formed thickly on the tonsils and uvula and pharynx, but hydrogen peroxide acted as a speedy solvent to the membrane, and prevented it from further spreading. Tonics—whiskey, iron, and quinine—were freely given in this case, and all of the symptoms were very much modified, No paralysis occurred, and the convalescence was not slow. This case was reported to me by Dr. R. C. Norris.

There are on record many cases which are similar to the two cases which are reported herein, and good results have been reported where hydrogen peroxide was freely used from the beginning, conjoined with the administration of tonics. The *Montreal Medical Journal*, some years ago, detailed the treatment of twenty-two cases by hydrogen peroxide, which were similar to the above, and out of the twenty-two cases only one was fatal, and in this case tonics were not used.

Of course, such good results as these are not always to be met with, but there is no doubt but that with the faithful use of hydrogen peroxide, with the free use of tonics and the enjoyment of absolute rest, we have a treatment for diphtheria which has shown itself to be useful and efficient. If we can rely upon statistics, the course of diphtheria has been greatly modified by this plan of treatment.—Dr. F. J. Bloodworth, in *Therapeutic Gazette.*

GYNECOLOGY.

INDICATIONS FOR AND THE RESULTS TO BE EXPECTED FROM SUPRAVAGIGAL AMPUTATION OF THE CERVIX UTERI FOR CARCINOMA.

Dr. Winter, of Berlin, remarks that in cases of carcinoma uteri total extirpation has, in the course of years, continued to become a more satisfactory, and, as a rule, a more safe operation, and it is employed exclusively by the majority of German operators. The supravaginal amputation of the cervix, which was devised by Schrœder fifteen years ago, has been almost entirely abandoned, notwithstanding the fact that Schrœder developed it into a safe method, and Hoffmeier has shown that the permanent results in cases of carcinoma of the vaginal portion are as good as those following total extirpation.

The author, however, advocates resort to supravaginal amputation in cases

in which the carcinoma is limited to the vaginal portion of the cervix, and in these only, and supports his views by the experience of the university gynecological clinic of Berlin, in which, since 1878, one hundred and fifty-five supravaginal amputations for carcinoma were done. Of these ten died from the operation, thirteen were lost from sight: there remained one hundred and thirty-two available for statistics. Of these eighty suffered from relapse, forty-nine remained healthy longer than two years, and twenty-seven longer than five years. No relapse is likely to occur after more than five years, so that about twenty-five per cent. of recoveries will represent the final result of supravaginal amputations. These results are not inferior to those obtained by total extirpation in similar cases. The mortality of supravaginal amputation: Olshausen, Fritch, Leopold, Kaltenbach and Schauta, out of four hundred and seventy-four extirpations had forty deaths—that is, about eight and four-tenths per cent. for a series of operations extending up to the present time. Supravaginal amputation has a mortality of six and one-half per cent., and these deaths almost all occurred while the operation was being perfected. Since the year 1884 six hundred and fifty operations have been reported, with only *one* death, and this was not wholly referable to the operation. Supravaginal amputation, therefore, should not be wholly discarded, since it is much less dangerous than total extirpation, and since the women may bear children without difficulty in the part of the uterus which is left, and since there are no dangers or sufferings which originate in the latter.

The number of the uterine cancers on which radical operations can be performed increases from year to year, with the progress of time, since the diagnosis can be made more accurately and earlier, and the methods of operation are continually growing more practicable. The writer has been able to prove this from the cases of the Berlin clinic for women, where since 1883 the percentage of cases operable has increased from nineteen to thirty-seven. In general, however, to-day, in the great hospitals, on the average, about twenty-five per cent. of the women suffering from cancer undergo operation. Since about one-fourth of all the women who are operated on remain free from relapse it follows that about one-sixteenth or seven per cent. of these patients are permanently cured of cancer, while ninety-three per cent. of the sufferers continue to-day to perish of cancer as formerly.—*Annals of Gynecology and Pediatry.—Annals of Surgery.*

GERMAN STATISTICS ON THE PROGNOSIS AND TREATMENT OF EXTRA-UTERINE PREGNANCY.

Of six hundred and twenty-six cases collected by Schauta, occurring during the years from 1876 to 1890, three hundred and sixty-nine recovered and two hundred and fifty-seven died, a mortality of forty-one per cent. This was distributed as follows: In the first half of pregnancy three hundred and eighty-one cases, two hundred and eighteen recoveries, one hundred and sixty-three deaths; in the second half of pregnancy ninety-three cases, forty recoveries, fifty-three deaths; after the normal term of pregnancy one hundred and fifty-two cases, one hundred and eleven recoveries, forty-one deaths; in two hundred and forty-one cases the cause of the affection was left entirely to nature, and of these seventy-five recovered, one hundred and sixty-six died, the mortality thus

being sixty-six per cent.; such cases, therefore, in the first half of pregnancy have a much more unfavorable prognosis than that of extra-uterine pregnancy in general, which has a mortality of forty-one per cent., from which the conclusion may be drawn that the prognosis is better for those cases which are operated upon.

The most frequent spontaneous termination of extra-uterine pregnancy in the early months was rupture and hæmorrhage into the general abdominal cavity; this occurred one hundred and twenty-eight times, with one hundred and twenty-one deaths; the prognosis in such cases is, therefore, extremely gloomy. Twenty-two times rupture occurred with formation of hæmatocele; of these cases eight died. In the second half of pregnancy death was caused most frequently by peritonitis, in consequence of decomposition of the fœtal sac after death of the fœtus. After the normal end of pregnancy the most frequent termination in cases which were left to nature was perforation of the fœtal sac into the intestine, vagina or bladder, or through the abdominal wall; this most frequently occurred in the course of one or two years, but was delayed in some cases much longer, even up to ten years.

Treatment.—In recent years the treatment of extra-uterine pregnancy has become entirely surgical. Killing the fœtus by electricity has not been accepted at all in Germany. Injections of morphine have only been employed, in any considerable number of cases, by Winckel, who has treated seven cases in this way, usually by injecting through the abdominal wall; two of these patients died and five recovered. In the early months, if the fœtal sac has not yet ruptured and the ovum is living, all operators are agreed that the sac should be extirpated. If, on the other hand, the death of the ovum seems probable, as indicated by the expulsion of decidua, protracted hæmorrhages, hardening of the tube and diminution of the size of the fœtal sac, there is a division of opinion as to what should be done. Martin and Veit recommend the extirpation of the fœtal sac in these cases also, supporting their opinion by a series of cases where, after such symptoms, rupture of the sac and fatal hæmorrhage occurred. Other surgeons use expectant treatment for these cases. Veit deserves the most credit for establishing the operative treatment for extra-uterine pregnancy, by extirpation of the fœtal sac. He operated eleven times in the year 1890; in two cases the ovum was living, in nine it was dead; all the patients recovered. If the sac is ruptured and hæmorrhage into the abdominal cavity has taken place, it is much more difficult to decide what course is indicated.

Schauta recommends operation even under such circumstances, basing his opinion on his statistics:

Rupture, with hæmorrhage in the abdominal cavity, without operation: one hundred and fifteen died and seven recovered.

Rupture, with hæmorrhage into the free abdominal cavity, with laparotomy: nineteen died, one hundred and two recovered.

These numbers are inexact, since in the case which terminated favorably the diagnosis of extra-uterine pregnancy was not always positive; of the nineteen fatal cases only six deaths were due to the operation, three on account of hæmorrhage, one from ileus, and two from sepsis, while twelve or more died only because the operation was delayed too long. The prognosis as to controlling the hæmorrhage by laparotomy is therefore very favorable; in many cases the

patients were saved in spite of the most extreme anæmia. Usually there is sufficient time to make suitable preparation for laparotomy; to wait for formation of hæmatocele when there is internal bleeding is a very unsafe matter, because it depends on the presence of previously existing adhesions in Douglas's space.—*Annals of Gynecology and Pediatry.—Annals of Surgery.*

TERRIER AND HARTMAN ON THE IMMEDIATE AND ULTIMATE RESULTS OF VAGINAL HYSTERECTOMY FOR CANCER OF THE UTERUS.

A POINT often lost sight of in the study of the therapeutics of cancer is the ultimate result of the operation performed for its radical cure. Several years ago one of these surgeons published the results of his first eighteen hysterectomies, and has kept track of them and included their present condition in this article.

Eighteen new cases are also reported, making a total of thirty-six hysterectomies with eight deaths, a mortality of about twenty-two per cent.

In both the old and the new series there was an error of diagnosis in one of the cases, therefore reducing the total number of hysterectomies for cancer to seventeen in each set, or a total of thirty-four with a mortality for cancer, as both these patients recovered, of about twenty-three and one-half per cent.

The four deaths in the first series occurred in first case from hæmorrhage on the seventh day; the second and fourth died in forty-eight hours of shock and hæmorrhage, and the third on the third day of shock.

In the second series the deaths were due to shock in a case where the cancerous growth had involved the bladder; twice to peritonitis. In the first one of the peritoneal cases a pair of forceps had pinched a loop of small intestine causing a perforation, and in the second the uterine body was everywhere adherent. Many pairs of forceps had to be employed, and the peritonitis seemed to originate from a pair of forceps that had been used as sponge holders, being mistaken for a pair clamping a vessel and being left sponge and all in the wound.

In the fourth and last case death resulted on the fourteenth day, when the patient seemed on the high road to recovery, from phlebitis of the lower limb. There is no death from hæmorrhage in the second series of cases, owing to the abandonment of the ligaturing of the broad ligament and the employment instead of continued forci-pressure.

In the last operations instead of trying to include the whole of the broad ligament in a single pair of forceps, two and occasionally three were employed. The ligament being grasped in the first pair, this portion is cut through, thus lowering the uterus a little and rendering it comparatively simple to include the remaining portion of the ligament in the grasp of the second pair of forceps. Sponges have been entirely abandoned, a current of water over the wound being enough to cleanse the parts.

The granulating masses projecting into the vagina are first curetted in order to clear the field of operation more thoroughly and dispose of any tendency to obstructing hæmorrhage from that source. In considering the ultimate results of the operation, two cases in the first series where the recto-uterine cul-de-sac was opened during curetting and the uterus removed should not be included.

In a third case the forceps were fixed upon friable and very suspicious tissue.

In one of these cases the patient committed suicide shortly after leaving the hospital, the other two survived eight and nine months.

Ten patients alone remain in whom the operative interference seemed at the time to be more serious than the condition demanded. Of these two are well without any trace of recurrence, after six years and four months for one, and four years and six months for the others. Relapse occurred in the eight others at different times between one and one-half months and two year.

In the second series there are also three incomplete hysterectomies. In one this was necessitated by the opening of a cul-de-sac in the course of curetting and a part of the thickness of the bladder wall was also resected.

This patient was much benefited and was still well four months after the operation. The other two lived two and one-half and fourteen months respectively. One of the ten upon whom the complete operation was performed has been lost sight of, but of the other nine, five are in good health. Three of these are free from relapse at from three years to eight months after the operation. The other two are free from all symptoms but have a small suspicious nodule at the side of the vaginal cicatrix. They have gone for three years and five months and ten months, and if their statements alone had been accepted and no examination made they would have been considered as completely cured.

Time and the increased number of cases only confirm the fact that:

(1) Vaginal hysterectomy for cancer is a serious operation.

(2) Vaginal hysterectomy does not seem to be less serious when it is partial, than when it is complete, so the latter operation is advised whenever the uterus is mobile, even when the vagina is involved for, this may be operated upon at another time.

(3) Relapse is frequent, seventy per cent. and often rapid, but may not manifest itself by signs noticeable to the patient until considerable time has elapsed (six months, two years).

(4) Thirty per cent. of the patients who survive *seem* to be completely cured, even when the malignant character of the disease has been fully established clinically and histologically.

M. Bouilly says that this operation continuing to be very serious and dangerous, is only justified by the malignant course of the disease.

In 1888, he had performed thirty vaginal hysterectomies, of which twenty-nine were for cancer, with seven deaths. Since then he had done twenty-one other cases, making fifty vaginal hysterectomies for cancer of the uterus performed since 1886, with sixteen deaths. Among the thirty-four recoveries from the operation six have remained well for a period varying from four years and three months to fifteen months. Two patients had a recurrence after three years and five months and three years and four months. Four have died after more than two years, and four have been lost sight of. Among the eighteen others recurrence has been noticed in from two years to eight months. In fifteen cases in which total extirpation was impossible, a partial removal was undertaken, and in all a recurrence followed very rapidly.

From the final results it is incontestable that a considerable number of these cases have been largely benefited by the operation. The results obtained in cancer of the uterus do not differ especially, therefore, from those of cancer of

other organs, the tongue, or the rectum for example, and the same principles should govern the decision in regard to interference. He advised not operating when total removal is impossible and complete vaginal hysterectomy when the cancer is limited.

In M. Segond's thirty-three hysterectomies of which twenty-five were for cancer of the cervix and eight of the body of the uterus there were seven deaths all among the cervical cases. Eight of the cases having been operated upon within six months were not considered; of the remainder (eighteen) seven had suffered recurrence, four of them dying in less than a year, and the other three had only been operated upon about eight months ago.

M. Verneuil had recently seen a woman who was operated upon in 1889 for a cancer of the cervix in whom a partial amputation was done, and where the microscope examination had revealed an epithelioma. He also cited another case that was well for nine years. The least time of survival in the partial amputation was twenty-one months which he considered better than in total hysterectomy.—*Annals of Surgery.*

ASCENDING GONORRHŒA IN WOMEN.

If gonorrhœa in the male still presents many points upon which pathologists differ, the same affection in the female scarcely possesses a point upon which they agree. Ever since the promulgation of Noeggerath's famous dictum as to the relation existing between pelvic affections in women and latent gonorrhœa in men, pathologists have busied themselves in the attempt to trace the gonococcus of Neisser from its entrance into the vagina up to the uterus, the Fallopian tubes, the ovaries, and the pelvic peritoneum, and to explain the pathological processes found in these various organs as due to its presence. Many obstacles have surrounded these investigations, and some of them have appeared insurmountable. For instance, it has generally been held that the gonococcus had not the power of penetrating into pavement epithelium, and consequently had no power of exciting disease in serous structures. To explain, therefore, the pathological changes found in the peritoneum covering the tubes in cases of pyosalpinx undoubted due to the gonococcus, as shown by its presence in the tubes, it was assumed that there was a "mixed infection," and that *staphylococcus aureus* and *streptococcus pyogenes* were the pathogenic factors of the peritoneal affection. Experimental researches on the lower animals, which are usually of such great aid in similar investigations, were not resorted to, because it was known that the mucous membrane of the lower animals was not susceptible to the action of the gonococcus. The same immunity was inferred to exist in the case of the peritoneum.

If we are to accept Wertheim's investigations, published in a recent number of the *Archiv für Gynäkologie*, this inference was erroneous. He has succeeded quite readily in exciting peritonitis in mice and guinea-pigs by injecting pure cultures of Neisser's gonococcus into the abdominal cavity. Rabbits and rats were found to be less susceptible, and dogs quite insusceptible. In two cases, after laparotomy done on women, Wertheim found gonococci in the tubes, the ovaries, and the peritoneal tissues. Previous to that, no one had succeeded in finding gonococci in the inflammatory products of the peritoneum. The gono-

cocci, according to this observer, pass to the peritoneum either directly through the walls of the Fallopian tubes, or through their abdominal openings. He has detected gonococci in every layer of the tubal tissues, and thinks he is justified in assuming that they may pass directly through these tissues to the peritoneal surface. It has also been hitherto maintained that the gonococcus was incapable of exciting inflammatory action in connective tissue. Wertheim's researches on the lower animals contradict this assertion. He has succeeded in several instances in setting up a virulent inflammation by injecting pure cultures of the gonococcus directly into the connective tissue of the lower animals experimented upon. In a few cases of pyosalpinx and ovarian abscess gonococci were the only bacteria found. On the strength of his experiments and investigations, Wertheim concludes that gonorrhœa in women does ascend to the uterus, to the tubes, to the ovaries, to the peritoneum, and into the tissues of the broad ligaments.—*New York Medical Journal.*

NEUROLOGY.

EVIDENCES OF HEREDITY.

NEUROLOGISTS in the practice of their specialty are perhaps able to produce stronger evidences to the support of the theory of heredity than any other class of professional men. That the nervous system is intimately associated with this process of transmission, no one will deny, and some observers go so far and classify such affections, as tuberculosis, cancer, etc., among the neuroses, because of their hereditary transmissibility.

I have lately had occasion to observe a family in which heredity played such an important rôle that I think the case worthy of being recorded.

Having been called to see a child suffering with cerebro-spinal meningitis, I learned that the mother, who possessed a very small head, had lost three children previously with cramps, and furthermore that all had enormously developed heads. The child in question was also macrocephalic, and this led me to make a thorough investigation.

The father, a tailor, aged thirty-six years, although in good health, has been annoyed much of late with lung difficulty, which I surmise is of tubercular origin. The apex of the right lung shows signs of beginning consolidation, with moist crepitant râles, and the respiration is bronco vesicular in character. Of his parents and grandparents he knows but little, having immigrated to this country when quite young.

The mother's parents are still living and healthy. Out of a family of eleven children, six died with "cramps," one of croup, and four are living. The mother's history is as follows:

Age, twenty-seven; height, four feet and eleven inches; weight, one hundred and ten pounds; complexion, fair; hair, brown; disposition, petulant, fractious; intelligence is much below mediocre. Early history: She had considerable trouble at dentition, otherwise has always been in the best of health. She menstruated when thirteen years old, and married at nineteen.

Her present appearance is at once conspicuous, owing to the small size and

slope of her head. The face, rather broad, offers nothing unusual. The two sides are symmetrical, the eyes, ears, lips, cheeks and nose are well developed, and perform their various functions without any disturbance. The forehead is elongated, somewhat triangular in shape. The head is moderately large just above the neck, then tapers cephalad, becoming pyramidal—a malformation sometimes called oxycephalus or sugar-loaf head. This anomaly, generally met with in idiots, epileptics, etc., is due to a premature union of the parietal with the temporal and occipital bones. The measurements taken a few days ago are as follows:

Circumference, ...	48	centimeters.
Occipito-frontal, diameter, .	14	"
Bitemporal, " . .	13	"
Biparietal, " . .	13	"
Occipito-mental, " . .	20½	"
Sub-occipito-bregmatic . .	16	"

With the exception of the head, the rest of her person does not deviate from the normal.

Married in 1884, she has given birth to five children.

The first child, a boy, was born March 25, 1884, after a comparatively easy labor. The child's head was exceedingly small as compared with the rest of the body, and as a member of the family remarked, it was "no larger than an apple." Otherwise the child was well developed, nursed well, slept well, until the latter part of June, when its head began to increase rapidly in size. In July, 1885, it was taken with convulsions, and died twenty-four hours later.

The second child, a boy, was born March 25, 1886, after another easy labor. Its head was also very small, otherwise it was well developed, and was in good health until the first appearance of dentition, when the head began to grow rapidly in size, terminating in hydrocephalus. In February, 1887, it was seized with convulsions, vomiting, head thrown backward, and three days before death became unconscious. It died February 13, 1887. The physician's diagnosis was "hydrocephalus with cerebro-spinal meningitis."

The third baby, a boy, was born September 3, 1887. The labor lasted but two hours, and the child appeared well developed except its head, which was likewise very small. About dentition time the head became macrocephalic and in April, 1891, it died, exhibiting all the symptoms of a basilar meningitis. The circumference of the head after death was sixty-four centimeters. Although three and one-half years old, he could neither walk, talk nor sit alone, and showed unmistanable signs of arrested cerebral development.

The fourth child, a girl, had a history similar to its predecessors; microcephalus at birth, becoming hydrocephalic at dentitition, and dying in convulsions on May 2, 1891.

The fifth child, a girl, was born August 5, 1890. Its head was even smaller than any of the preceding children and remained so. In February she began to emaciate, her body and extremities being reduced to a mere skeleton. In June, 1891, she died with cramps.

None of these children appear to have had enlargement of the bones, joints or glands, and the lungs seemed to have been in good condition.

To review the case briefly, then, we have here a family of five children,

microcephalic at birth, dying in convulsions before dentition, or else becoming hydrocephalic at this time and dying of meningitis, probably tubercular in character, later on. The father of this family has a history of tuberculosis; the mother, a microcephalus, offers symptoms of cerebral degeneracy. To my mind a soil more fertile for the propogation of neuropathic and psychopathic tendencies cannot exist. Being convinced of this fact, I informed the parents whose home had been made desolate by the mysterious but all-wise treatment of nature, and counseled them to live henceforth, if not a virtuous, then a sterile life.—Dr. W. C. Krause in *Journal of Mental and Nervous Disease.*

MEDICAL MELANGE.

ACCORDING to an exchange Dr. Kholmogoroff cured a case of severe pruritus vulvæ by six applications of galvanism of ten to fifteen minutes' duration, and ten to fifteen milliamperes strength of current. The positive electrode, insulated within the vagina, while the cathode, covered with chamois and moistened with a salt solution, is applied over the affected area.—*Weekly Medical Record.*

RADICAL CURE OF PROSTATIC OBSTRUCTION.—Norton (*Medical Press and Circular*, Volume CIV, Number IV) describes a prostatome, which is similar in mechanism to a lithotrite, but both blades have cutting edges that do not overlap, the female blade being so shaped that it will easily glide back over the enlarged prostate, after introduction into the bladder, and so hollowed that it will retain within itself the section when cut. He reports four cases, in three of which this instrument, passed by median perineal section, removed a sufficient amount of the prostate to procure complete relief and cure, and says that it is his intention to further perfect this instrumental so that it may be passed *per urethram.—American Journal of Medical Sciences.*

HEMICHOREA IN PREGNANCY.—Dr. Cameron in the *Montreal Medical Journal*, writes, that, as in the non-pregnant, peripheral lesions may cause choreic movements, which subside when the irritating part is excised; so in pregnant women peripheral irritation may be propagated from the uterus to the central organs and may keep up choreic movements till the cause of irritation is removed. This is well exemplified in the following case: An anæmic, neurotic patient, subject to hysterical fits, bearing family rapidly, with a lacerated cervix and a tender retroflexed uterus, developed chorea of the right side of the body in the fourth month of pregnancy; in a few days the left side became involved while the right side began to improve. By appropriate mechanical treatment the retroflexion was corrected, and the chorea disappeared in little more than a week.

VIVISECTION IN GERMANY.—The education committee of the Prussian house of representatives has lately had under consideration a petition from the "International and Hanoverian Association for the Suppression of the Scientific Torture of Animals," urging the absolute prohibition of vivisection. Both the house of representatives and the reichstag have already had the question before them, and the late cultus-minister, Dr. von Gossler, imposed certain restrictions on scientific investigators in respect of experiments on animals with the object of preventing any abuse. The majority of the committee were of opinion that science could not dispense with vivisection, and that abuses had only been

proved to have occurred in a few isolated instances. Such exceptional cases did not, however, in the opinion of the committee, justify the total prohibition of vivisection. The house was therefore recommended to pass to the order of the day.—*British Medical Journal.*

HYDROGEN PEROXIDE AS A DISINFECTANT OF WATER.—Dr. Altehoefer, after giving references to the literature of the subject, gives (*Medical and Surgical Reporter*) his researches on the disinfectant power $H_2 O_2$ dissolved in water. He finds that the addition of one per one thousand to ordinary drinking water, to drinking water containing sewage, or to water containing typhoid bacillus or cholera bacillus is quite sufficient to destroy the various saprophytic and pathogenic organisms contained under these conditions, if it is obtained perfectly fresh and kept in good condition, and if it is allowed to act for a period of twenty-four hours. It is specially valuable for the disinfection of drinking water because it does not effect the taste, does not alter the color, and in the proportion mentioned is perfectly innocuous. As regards cost, he calculates that sufficient drinking water—say ten liters—for a family may be sterilized by means of $H_2 O_2$ at a cost of about five cents per diem.

WARTS AND PORPOISES.—Dr. Louis Lewis writes to the *Times and Register*: "Last month a gentlemen called on me to be examined for life insurance. I noticed that the backs of his hands and fingers presented a large array of unsightly warts ('verrucæ vulgaris'), which he said had hitherto resisted all treatment, either returning or refusing to go. He went to the West Indies, and, during the voyage, shot a porpoise, which was hauled on deck, and, in cutting up the carcass, his hands were freely besmeared with the blood. To his surprise, every wart vanished in short order, and none have come back. Returning to Philadelphia to-day, he presented himself to me with a perfectly clean pair of hands. I have often heard that pig's blood will remove warts, and have received the news with a large grain of salt; but here is a singular coincidence, to say the least of it, if only in the resemblance between a porpoise and a pig. I should like to give this 'remedy' a trial; but few druggists keep porpoises in stock, and I do not think I could shoot one."

PREGNANCY AND VENTRO-FIXATION.—Fraipont (*Annal. de la Soc. Méd.-chir; de Liège*, 1892, Number IV) reports seven cases of ventro-fixation by Winiwarter and himself, three of the patients, who were married, becoming pregnant soon after operation, although one of these had a small ovarian cyst and two a cystic ovary. In each instance the diseased ovary was removed and the fundus uteri was attached by deep sutures including the edges of the abdominal wound. One woman was delivered at term, another at seven and one-half months, in consequence of an accident, the child living; the third bore a living child at the eighth month. All the patients complained of severe pains in the cicatrix between the third and fourth months of pregnancy, which were absent in the latter half. Labor was normal in each instance. In one case only the uterus was found to be retroverted after delivery. It is doubtless desirable that pregnancy should not occur so soon after the operation, since the adhesion is at first quite firm, but later becomes more cord-like and distensible, allowing the uterus to rise out of the pelvis, while preserving its normal position.—*American Journal of the Medical Sciences.*

THE INFLUENCE OF PELVIC DISEASES ON THE VOICE.—Klein (*Journal of the American Medical Association*, 1892, Number XVI) says that during menstruation women are prone to inflammation of the tonsils and larynx, and that he has observed in singers at this time that the voice often becomes hoarse and deep, assuming a masculine tone, so that one who is accustomed to noting the difference can tell when they are menstruating. In many cases of ovarian disease he has observed hypertrophy of the tonsils and uvula; as in eunuchs, there appears to be an intimate relation between the voice and the sexual organs. *American Journal of the Medical Sciences.*

INJURIOUS EFFECTS OF THE TELEPHONE UPON HEARING.—Gellé, of Paris, observes that those who frequently use the telephone sometimes present a series of aural disturbances similar to those resulting from the continued action of loud noises. In such cases there may be found inflammations of the membrana tympani and of the tympanic cavity, or there may be irritable conditions of the nervous apparatus of the ear, exercising an influence upon the general nervous system. Hence, in the cases observed, there were pains in the ear, diminished hearing, subjective noises, hyperæsthesia acoustica, and vertigo, all of which were manifested at first during loud auditory impressions, but later became permanent, with general nervous irritability. Probably, for the production of the aforesaid disturbances, there must be a certain predisposition, due either to a greater excitability of the entire nervous system or a previous and still existing disease of the auditory organ.—*Annales des Maladies de l'Oreille.—American Journal of Medical Sciences.*

THE MORTALITY OF WAR.—In the past century it is estimated that over nineteen million persons have been killed in the wars of civilized countries, and twelve hundred millions during the last thirty centuries. Flammarion, the astronomer, makes some curious calculations regarding this mortality rate. The blood of the victims would amount to eighteen million cubic metres. This quantity of blood weighs 18,900,000,000 kilogrammes. It is an unfailing stream, which every hour since history began has unceasingly poured six hundred and eighty litres of blood to dye the royal purple worn by the occupants of imperial thrones. If the 1,200,000,000 skeletons should rise and climb one upon another the ladder thus formed would reach the moon, coil about that body, and, continuing onward, would mount into infinite space four times as far again, that is, 500,700 leagues in height. The corpses, if thrown into the channel at Calais, would form a bridge between France and England and separate the ocean from the North Sea by a weir. If only the heads of the men slaughtered in war were taken and placed side by side, a band would be formed reaching six times around the world.—*New York Medical Record.*

THE MAN WITH A MUSICAL ANUS.—Some four or five years ago M. Verneuil exhibited to his class in Paris a case of what he facetiously denominated "musical anus." The patient was able at times, when sufficient flatus had accumulated in his colon, to evacuate it with some force, thereby producing a high-pitched musical note resembling that of a violin. On close examination he was found to have, in the cellular tissue about the lower end of the rectum, a pneumatocele, with an opening into it from the rectum, formed by a narrow slit between two thin folds of mucous membrane, which, acting like a reed, pro-

duced the sound when the air was expelled from the tumor by forcible pressure from above. Numerous cases of fistula and other deformities of the anus have been seen in which the expulsion of gas from the bowel was accompanied by peculiar sound, some, perhaps, musical to the enthusiastic observers. But in all these cases there has been some deformity or malformation of the rectum or anus. Dr. Baudouin, however, has lately reported, in the *Semaine médicale*, a case that may with justice be call one of musical anus, and one that is of much interest from a physiological point of view. The patient, or rather the exhibitor, is a man, aged thirty, well developed, but without muscular excesses, tall, of full weight, and, so far as can be made out, entirely free from any disease or deformity. His digestion is good, and he does not develop an unusual quantity of gas in the bowel after eating. There is no pyrosis or abdominal tympanites. His fecal passages are normal, regular, and well moulded. The anus and rectum, in a state of repose, present nothing abnormal. The sphincter is moderately strong, but quite distensible, notwithstanding its daily exercise. The rectum is normal and not dilated. The remarkable feature of the case is that the lower bowel, at least, seems to be absolutely under the control of the man's will. He can empty it completely whenever he desires, a very fortunate accomplishment for his clothing and for the olfactories of his audiences. He was reared on the shores of the Mediterranean, and it was here that he first noticed his remarkable power. While bathing one day he observed, upon strong inspiration, the sensation of cold in his pelvis and abdomen, and at the same time felt the sea-water entering his rectum. In a short time he was compelled to empty his bowel, and noticed that he had taken in a much larger quantity than he had supposed. By practice in the ordinary bath and in the sea, he became able to store a considerable quantity of water, to retain it for some time, and to eject it with much greater force than at first. Later on he noticed that he could accumulate air in his bowel, as well as water, and by its expulsion could give rise to certain variations of sound. Applauded by his associates, who acknowledged his superiority in this class of exercise, he eventually developed the faculty beyond measure, and frequently gave exhibitions of his art before a select circle of his friends. From these reunions he began to exhibit his powers in the clubs and cafés, until he became the best known and greatest curiosity of the place. As his reputation spread he made journeys to the surroundings towns and villages, Béziers, Nîmes, Toulouse, and Bordeaux. At the latter place he was examined by many of the medical faculty, and it was found that he really could imitate certain musical instruments and emit certain popular melodies.—*New York Medical Journal.*

SALOPHEN.—Of the recently introduced remedial agents, salophen appears to have very positive and substantial claims to consideration, and it is hoped that its qualities will be subjected to thorough, clinical tests. It is so desirable to have a salicylo-phenolic derivative that will possess the therapeutic virtues of both components without their toxic properties, that therapeutists will watch the trials of salophen with great interest. The special feature of salophen upon which is based its claims of superiority to its homologues is bess explained by its chemistry. It is not toxic and cannot become so in the stomach from the fact that the gastric juice does not react upon it. The pancreatic juices decompose it sufficiently to set free the salicylic component, which is thus permitted

to perform its therapeutic office. But the phenolic component is still held by its chemical bond and passes off as an acetyl p. amidophenol without toxic influence. In consideration of these facts, together with the highly favorable clinical reports of Drs. Goldmann, Siebel, and Guttmann, there is a strong probability that the long looked for, effective, yet *safe* remedy for rheumatism and the neuralgias has been discovered. It appears also that salophen is to hold a pre-eminent position as an antiseptic and some gratifying reports of its value in typhoid fever have already been made.

Science and the Eight-Hour Movement.—In view of the recent May Day demonstration in support of "an eight-hour day," it may be interesting, says the *Lancet*, to recall the experiments by which Pettenkofer and Voit attempted to ascertain what amount of work a healthy laborer could accomplish without injury to his health. They constructed a chamber in glass which was hermetically closed. Inside they placed a wheel to which was attached a chain. By turning the wheel the chain raised a weight of twenty-five kilogrammes. A healthy, vigorous laborer was put inside this glass room; and, deducting the time required for meals, he was made to turn the wheel for nine hours a day. This was considered equivalent to hard physical work. The workman was carefully weighed before and after the experiment; the food supplied to him was likewise weighed and analyzed. Very great care was taken to make this glass room absolutely air-tight. No air could get in or out excepting through the air inlet and the air outlet. Thus it was possible to analyze the air as it went in and as it came out. Pettenkofer was therefore able to ascertain that during the nine hours' work the laborer had expended in the form of carbonic acid one hundred and ninety-two grammes of oxygen more than he had been able to inhale during that time. To cover this deficit, it was calculated that the workman must have expended twenty per cent. of the provision of oxygen stored in his system. Of course this deficit was to some extent compensated by the night's repose; but, nevertheless, the balance was not re-established. During the night he naturally absorbed more oxygen than he utilized. But as the respiratory organs work more slowly at night the process of recuperation was not sufficiently prolonged. Both Pettenkofer and Voit came to the conclusion that a night's rest was not sufficient to re-establish the normal condition after a day of very fatiguing toil. They were of opinion that the deficit might be equal to ten per cent., and in some cases twenty per cent., of the total stock of energy, and this in spite of the restorative effect of a good night's rest. It was the Sunday rest that alone could enable the body to take up the oxygen lost during the week's toil. The experiment shows clearly enough the fact that manual labor may be too hard and too prolonged. It also shows the need of Sunday rest. But it would be unsafe to compare the steady toil at a wheel in a closed glass case with the very leisurely labor of the majority of workmen who work out of doors.

New Observations on the Physiological Action of the Mercurials and Iodides.—In *Merck's Bulletin*, 1892, Number I, page 3, Dr. William Henry Porter attempts to find a clear and rational physiological explanation for the good effects that are known to follow when these substances are introduced into the system as medicinal agents. He believes that these inorganic compounds, taken into the body in excess of the absolute demands of the physiological economy, act as foreign bodies, and in this way become universally irritants to

the system. To remove this element the system is called upon to make abnormally great exertions, and in attempting this extra amount of work there is at once a demand on the part of the physiological economy for a larger nutritive supply to accomplish this excessive amount of work. If the foreign body can be eliminated from the system, and a sufficient nutritive pabulum supplied and assimilated to sustain this increased demand upon the vital expenditures, the system is in this indirect manner generally improved in its nutritive vitality. He concludes that the inorganic compounds are not chemically decomposed in the system, but act by their mechanical presence; that the action of the mercurials and iodides is governed by the same general chemical and physiological laws, and that they act in a similar manner; that the urine should be carefully watched and frequently examined when using these inorganic compounds; that diet, digestion, and assimilation should be as accurately regulated as the dose of the drug, if the best results are to be obtained from our therapeutic agents.—*American Journal of Medical Sciences.*

THE SPANISH-AMERICAN MEDICAL CONGRESS.—The four hundredth anniversary of the discovery of America by Columbus is to be celebrated in Spain next autumn, with much pomp and circumstance. The medical profession proposes to do honor to the occasion in its own way by holding a congress, in which it is expected that the whole Spanish-speaking profession will be represented. The organizing committee, in their circular of invitation, point out that Pablo Toscanelli, a Florentine physician, had much influence in inducing Columbus to embark on his memorable voyage, and Garcia Hernández, physician to Philip the Second, was consulted by the Spanish court as to the feasibility of the explorer's plans. The labors of Juan the Second's physicians, Rodrigo and José, who were two of the most eminent geographers of the time, had smoothed the way for Columbus's enterprise. Two medical men, a physician and a surgeon, shared the dangers of his first voyage, and Chanca, who sailed with him in the second, made a study of the flora and fauna as well as of the diseases of the new world. Garcia Hernández himself commanded the scientific expedition organized by Philip the Second, and brought back a large quantity of observations, most of which seem to have been stowed away in official pigeon-holes at Rome, and forgotten. The Hispano-American congress will be held at Madrid in October next. The official language will be Spanish, but communications in English, French, Portuguese, and Italian will also be received. The work of the congress will be carried out in five sections—history, hygiene, medicine, surgery, and pharmacology and therapeutics. Among the subjects proposed for discussion in the section of history are the following: The influence of certain physicians, antecedent to or contemporary with Columbus, on the discovery of America; popular medicine in America; had the discovery of America any importance in the epidemic development of syphilis in Europe? In the section of hygiene food for discussion will be found in such questions as yellow fever, the acclimatization of Europeans in America, precautions to be taken against malaria in hot countries, the domestic animals introduced by the Spaniards into America, and their influence on public health, etc. In the section of medicine the most promising topics are the comparative study of alcoholism in Europe and America, the neuroses which find specially favorable conditions for their development in America, animal and vegetable parasites of America in their

relation to diseases of men and animals, the pathological predominance of the lymphatic glandular system in hot climates and the causes which produce it, etc. In the section of surgery there will be a debate on modifications in the course and in the treatment of syphilis, both in Europeans and in Americans, consequent on sudden changes from one continent to the other; the treatment of wounds, and the conduct of operations in America, especially in the tropical zone, will also be discussed. In the section of pharmacy and therapeutics the programme of discussion includes the treatment of yellow fever, the therapeutic value of quinine, the differences in the treatment of malaria in Europe and America, and the improvements in pharmacology which have followed the discovery of America. Communications intended for presentation to the congress should be sent to the general secretary, Dr. D. Sinforiano Garán Mansilla, Magdalena 19, *Segundo izquierda*, Madrid.—*British Medical Journal.*

Anæsthesia in Veterinary Surgery.—"In the progress of veterinary science there has been perhaps no greater advance toward the alleviation of animal suffering than the introduction of the use of anæsthetics, which during the last decade has rapidly gained ground. Concomitant with the adoption of these means have been many refinements in the practice of an art whose sphere of usefulness is thereby extended, and whose position in public estimation must be accordingly elevated. It is now, we are glad to observe, the ordinary practice in delicate and painful operations to resort to the use of general or local anæsthesia. On the continent, for general anæsthesia chloral hydrate, by intravenous injection, is largely employed, as much as two ounces often being used for the horse. This agent is sometimes administered by the mouth to animals of the same class, in doses of from five to nine ounces. This practice has not found much favor with British veterinarians, chloroform and ether being in general use for all animals. Horses and ruminants are rarely affected unfavorably by chloroform, fatal results being very uncommon. From two to twelve drachms is usually sufficient to induce anæsthesia, which may be maintained for indefinite periods by proportionate quantities. A mixture of chloroform and ether is preferred for dogs, who require greater care, but though a small proportion of these animals unaccountably succumb to the effects of chloroform, judicious administration, with due regard to regularity of breathing and equalization of dose, minimizes the danger. For amputation, as of tongue or penis, castration, cystotomy, abdominal section, and 'firing,' it is in every-day use and highly appreciated, while in obstetric practice, where much operative interference and force are often necessary, great difficulties and dangers are lessened and much suffering prevented. For removal of tumors, opening of fistulæ, neurectomy, 'firing,' etc., subcutaneous injection of cocaine has become common. The appliances for administering chloroform and ether to the lower animals are varied and numerous, but the sponge in a leather bag, perforated at the bottom, appears to be the most general form. It would be difficult to estimate the amount of suffering thus spared the animal, the advantages of more rapid recovery, etc., to the owner or the increased comfort and safety of the operator; and we hope every means will be adopted to encourage the use of the beneficent agency among those creatures who have to submit to our care."—*British Medical Journal.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THREE SURGEONS.*

By G. V. VOORHEES, M. D., Coldwater, Michigan.

The nature of my paper may seem from the title somewhat ambiguous. My object in choosing it will appear hereafter. If I should attempt to call your attention to all that is interesting in the lives of these surgeons, you would be wearied, and there would remain no time for remarks by the distinguished surgeons who are to follow me. I therefore give you short sketches of three men whose memory I know you will delight to honor. Two of them some of you knew. One of the two was a resident of our state, the other of an eastern state. The friendship existing between these two surgeons, and their admiration for a surgeon of an earlier period, is the reason for linking their biography in this manner.

The surgeon, who was the object of admiration by these two friends, and admired by us all, practiced the art before the time of asceptic surgery, anæsthetics, or the use of the ligature; at a time when hæmorrhage was controlled by the hot iron, and the surgeon was a barber—Huguenot surgeon—Ambrose Parè. At the mention of that name, we see a battle-field of the sixteenth century. In the foreground of the picture are wounded soldiers lying on the ground, and bending over them the surgeons engaged in efforts to control hæmorrhage with the hot iron. By their side, the pot for heating the irons and the bellows for blowing the fire. On every side, are warriors with their swords and spears, engaged in hand to hand conflict. In the center of the picture, lying upon what appears to be a rough stone table, is a warrior, held down by other warriors, whose leg has just been amputated. The surgeon stands holding the artery with a pair of rough forceps in one hand, and with the other holding up to the

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

inspection of the king and his retinue the ligature, with which he is about to tie the severed arterties. The king and other spectators stand with uplifted hands, and with faces expressing surprise and amazement. The bearing of the surgeon is noble and dignified, and the expression of his face triumphant. No matter how the battle has gone, he is victorious. Henceforth, the cruel hot iron is banished, hæmorrhage from large arteries is easily controlled, and amputation on a large scale made possible.

You know Parè was born at Laval, in the province of Maine, in 1517, died in 1590, and that he began life as apprentice to a barber surgeon in Paris. We know most of him as a military surgeon. During the campaign of Francis I in Piedmont, he had the boldness to depart from the usual method of treating gunshot wounds with oil, and depended upon a simple bandage, from which proceeded may other developments in rational surgery. In 1545 he began to attend the lectures of Sylvius, the Paris teacher of anatomy, to whom he became prosector, and in 1550 published a book on anatomy.

Parè was adored by the army, and greatly esteemed by successive French kings, but his innovations were opposed, and he had to justify the use of the ligature, as well as he could, by quotations from Galen, and other ancients. How true it is that—

> "With fame, in just proportion, envy grows,
> The man that makes a character, makes foes."

I well remember meeting, at the session of the American medical association at Buffalo, in 1878, the first one I attended, a gentleman who attracted and interested me very much. He was so enthusiastic, and so willing to impart to others the results of his experience and skill. Speaking of this man at the last session of the American medical association, to ex-President H. O. Marcy, he said with a good deal of feeling, "He was a grand man." And his name was—Henry Austin Martin.

He was born in London, England, July 23, 1824, and died in Boston, Massachusetts, December 7, 1884. He came to this country at an early age, graduated at Harvard medical school in 1845, and practiced in Boston. At the beginning of the civil war he was appointed staff surgeon, and rose to be surgeon in chief of the second corps, army of the Potomac, which post he held until the close of the war, and on his resignation received the brevet of lieutenant colonel for gallant and meritorious service.

After the war he practiced surgery in Boston, giving special attention to diseases of the rectum. He was an authority on the subject of vaccination, and first introduced, in 1870, into this country, true animal vaccination. In 1877, as chairman of the committee on animal vaccination, he made a full report, which was widely quoted from in this country and abroad.

You remember he introduced the pure rubber bandage for the treatment of ulcers of the leg and kindred troubles in 1877, and that in 1878 he reported to the American medical association many successful operations of tracheotomy he had performed without tubes. In 1881 he read a paper before the International medical congress, at London, on the treatment of synovitis of the knee-joint by aspiration, and subsequent use of the Martin bandage.

Dr. Martin was a frequent contributor to medical and other journals in this and other countries.

The man of whom I shall now speak, was well known to some of you. Before I knew him, personally, I heard him spoken of as a "Christian gentleman." I would like to speak of him at length, for he was my friend, and a man whom I admired for the many sterling qualities which he possessed; among them that of devotion to professional duty, love for his profession, and strict adherence to medical ethics.

Although a resident of a small city of our state his reputation as a surgeon and gentleman was by no means limited. He has been dead fourteen years. His name was John Henry Beech, of Coldwater. Born in New York state in 1819, he died at Coldwater, Michigan, in 1878. His father was a physician, and died when John was a lad—a frail lad at that. It was the father's request that the son should not study medicine, but so great was his love for the study he could not refrain. So, after preparation and hard work to pay his way through college, he graduated at Albany medical college in 1841, and began practice in his native place. In 1850 he located in Coldwater, where, until the breaking out of the civil war, he practiced medicine and surgery. He was one of the first volunteer surgeons to hasten to the battlefield, after the disastrous battle at Shiloh church, where he labored so hard that he soon returned home on account of broken-down health. As soon as health returned he was commissioned surgeon of the twenty-fourth regiment, Michigan infantry—a regiment raised and officered, with the exception of its surgeon, in Wayne county. He was appointed one of the operating surgeons of the first brigade, first division, first army corps in 1862, and in 1864 was made surgeon of the same brigade. At the battle of Gettysburgh Dr. Beech continued his work in the express office building, while the tide of battle swept through the town, leaving him and his faithful fellow surgeons prisoners. They were not molested, however, and continued their work for three days.

Dr. Beech was opposed to amputation at the shoulder-joint, and Surgeon Chamberlin, chief of division, requested the operating surgeons to submit that class of injuries to his especial judgment and skill. He performed an unusual number of resections at the shoulder-joint, with excellent results.

Dr. Beech was an active member of medical societies. In early life he was instrumental in resuscitating the medical society of Orleans county, New York, and united with others in reviving our state society. In 1865 he was elected its president. In 1854, 1855, and 1875 he was a delegate from the state society to the American medical association. In 1870 he was elected corresponding member of the Detroit academy of medicine, and in 1872 a corresponding member of the gynecological society of Boston. In 1871 he was president of the alumni association of Albany medical college. In July, 1873, he addressed printed invitations to the several physicians and surgeons of southern Michigan and northern Indiana, inviting them to meet in the city of Coldwater, to consider the propriety of organizing a district medical society. The southern Michigan medical association was organized at that time, and is still in a flourishing condition, it being now a tri-state society, composed of the states of Michigan, Ohio and Indiana. In 1865 he was elected a member of the American health association, and he was also one of the editors of the *Michigan Medical News.*

Enough has been said to bring me to the object of presentation of this paper.

It was Dr. Beech's desire that his medical library should become the property of some medical library association, but he had been so liberal during his lifetime that his wishes could not be carried out.

It seems to me that it will be proper for this association, in consideration of his state reputation and his active interest in medical societies, to honor his memory. I therefore wish to hang upon the walls of the Detroit medical and library association a picture of Dr. Beech, a simple woodcut, printed in 1878, and by its side another woodcut, printed in 1592, of Ambrose Parè. The cut of Ambrose Parè was presented by Dr. Henry A. Martin, to Dr. Beech, and after the death of Dr. Beech, fell into my hands. I also wish you to honor the memory of Dr. Martin in the same manner, and therefore present you with his photograph taken in 1881.

Thus appears my object in choosing for my inaugural address the title of "Three Surgeons."

A LINE OF ACTION IN PUERPERAL CONVULSIONS.*

By DELOS L. PARKER, M. D., Detroit, Michigan.

Puerperal convulsions or eclampsia is one of the diseases that the least excitable of medical practitioners meets with dread. The distorted features and horrible writhings of the patient suffering from this disease make an impression on the beholder that is not easily forgotten. The great mortality attendant upon the disease serves greatly to increase its horrors.

It occurs somewhere in the neighborhood of once for every three hundred cases of labor. Probably seventy-five per cent. of all cases are in first labors. There are sometimes premonitory symptoms, which symptoms correspond rather closely with those accompanying Bright's disease, such as frontal headache, disturbances of vision, œdema of extremities, vomiting, etc. The attack may come on before, during or after labor—is most frequent, however, during labor.

The attack itself is sudden. The duration of the convulsion is probably not longer than two or three minutes. This is followed by coma more or less marked, lasting generally about a half hour. The convulsions are very rarely single. After an interval of from a few minutes to a few hours the attack is repeated. The coma resulting grows more intense with each succeeding attack. The attacks continue until coma ending in death comes on, or gradually lessen in violence and frequency until recovery is established. The mortality to the mother is about thirty per cent., and the mortality to the child about fifty per cent.

The prognosis is much influenced by the severity of the attack and the time of its establishment. Convulsions coming on before labor are more fatal than those coming on during labor, and the latter are more fatal than those coming on after labor is completed. Of course, the general condition of the patient, her freedom from cardiac, pulmonary or other serious disease has much to do with the prognosis.

As to the cause of the convulsions, much diversity of opinion prevails. For some time the belief was general that urea present in the blood through

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

imperfect action of the kidneys was the sole cause. Certain discrepancies appeared, however, to separate uræmic convulsions from puerperal convulsions. In puerperal convulsions the temperature rises and in uræmic convulsions the temperature falls. H. C. Wood, in his "Nervous Diseases and their Prognosis," says: "Puerperal convulsions are usually supposed to be uræmic, but according to the researches of Bourneville they are distinctly separated from uræmia by the fact that the temperature rises almost bruskly in the beginning of the convulsions, and, when the latter are frequently repeated, maintains itself at an elevated position with great steadiness. Each paroxysm is marked by a slight increase of heat, and, if the attack is to end fatally, the temperature gradually falls. I am, however, doubtful whether the temperature *always* falls in true uræmia. I have certainly seen it rise in coma occurring in persons suffering from contracted kidney and apparently uræmic. The subject is one of much interest and needs further study."

In the "American System of Obstetrics," published in 1889, Parvin, of Philadelphia, says: "There are very serious objections to the acceptance of the theory which makes puerperal eclampsia depend upon renal disease exclusively. Probably not more than one woman in five who have albuminuria during pregnancy or in labor is eclamptic. Again, while the cases of this sort are not frequent, yet a long list of eclamptics who were not albuminurics has been collected. It is therefore certain not only that renal disease is very far from being a constant forerunner of puerperal convulsions on the one hand, but that its absence on the other hand is no certain proof that such convulsions will not occur. Furthermore, as showing the unsatisfactoriness of our knowledge as to the essential cause of eclampsia, even in those cases where the disorder is clearly dependent upon renal failure, the symptoms by no means correspond with those observed in what is known as uræmic intoxication."

At the annual meeting of the medical society of Virginia last year, Dr. J. T. Graham, of that state, read a paper on the subject of "Puerperal Eclampsia," and drew conclusions from the study of one hundred and eighty cases. The following report is from the *Journal of the American Medical Association* of that year: "He maintains that the time-honored theory that albuminuria is a cause of puerperal eclampsia is not true in every case. He treated the subject in four divisions: first, albuminuria without eclampsia; second, eclampsia without albuminuria; third, the condition of the kidneys during pregnancy, and fourth, the products of intestinal putrefactions. In the first division it was proved from statistics that the majority of cases of albuminuria during pregnancy do not result in convulsions. Under the second division it was stated that cases of eclampsia have often been known where no albumen was found in the urine. The theory of obstruction to the free flow of the urine by pressure of the gravid uterus upon the kindeys, their blood-vessels and ureters, is dwelt upon in the third division; but particular attention is called to the fourth division, namely, *the absorbed soluble products of intestinal putrefactions.* Constipation is the rule in the pregnant woman, and putrefaction of the contents of the large bowel is more liable to occur, the products of which are absorbed, more or less, and are poisonous. This is especially dangerous if the kidneys are not active enough to eliminate these poisons from the blood."

Among other theories might be mentioned the one that urea is broken down

in the blood and the resulting carbonate of ammonia is the poison that causes the irritation to the nerve centers. In a few cases some brain lesion has been found to account for the attacks. In another and fairly frequent class of cases reflex irritation from an over-distended bladder has been found to be the cause of the trouble, and upon relief of this condition, rocovery has been immediate. Dr. Charles Féré, of France, in an article in a recent number of the *Archives de Neurologie*, sets forth his belief that convulsions occuring in intestinal affections of children in scarlatina, in pregnancy, and particularly in parturition, prove the sufferer to be affected with an hereditary neuropathic disposition. He thinks in nearly every case of this kind the family history will show hysteria or epilepsy.

That there is a lamentable lack of knowledge of the exact etiology of this most important disease is apparent. From his own reading and observation, the writer of this paper inclines to the theory that the original cause of the disease, when no brain lesion or reflex irritation is present, is a ptomaine developed in the intestinal tract. This poison taken up by the blood is carried to the different organs of the body. The brain, spinal cord and kidneys are most affected by this irritation. The two former on account of the delicate nature of the machinery that governs their functional activity, and the latter by too great exercise of its excretory function. This interference with the normal action of the brain and spinal cord affects the actions of all the organs of the body, including, of course, the kidney. The irritated kidney, also, by leaving in the system products that should be excreted, has a like action on the brain, etc. Thus there is established a vicious circle that has the effect of loading the blood with poisonous materials. According to this theory the different phenomena of convulsions are to a great extent separated from each other, and are made dependent upon a common cause. This might explain why in one case we find uræmia or albuminuria with convulsions, and in another case the same conditions without convulsions. To the objection that this condition is frequent in the non-pregnant state and yet convulsions do not follow, the answer might be made that in the non-pregnant condition the system is not embarrassed by pressure on the abdominal viscera, and particularly on the colon, and is able, therefore, to free itself of this condition by throwing out the decomposing materials from the intestinal track. Also there is absence of the brain congestion and nervous irritation that may be found during pregnancy, labor and the puerperal state. Recent writers seem to favor this theory of the cause of puerperal eclampsia. The words of H. C. Wood written a few years ago may, however, be repeated with propriety to-day, "the subject is one of much interest and needs further study."

When in the pregnant woman there have been found albuminuria, severe headaches, œdema, nervousness, or any of the conditions that have been considered as forerunners of eclampsia, treatment is demanded. A milk diet, stimulation of the emunctories and correction of any errors of gastric or intestinal indigestion will probably be found sufficient in the majority of cases. Where, however, the symptoms are found to be severe, and particularly where vomiting is persistent, it may be found necessary to terminate pregnancy artificially.

Of the convulsions themselves, the lack of exact knowledge of their etiology makes the treatment to a great extent empirical. The first duty of the physician

would seem to be to eliminate the possibility of reflex irritation by using the catheter. If this procedure does not remove the cause of the trouble, the choice of several modes of treatment is recommended in the text-books and by the writers on the subject. In one respect the treatment of this condition differs from that of most other diseases in this: that what is to be done, is to be done at once. The physician who suddenly finds that he has on his hands a patient suffering with puerperal eclampsia has no time to consider etiology, predisposing causes, etc. His duty is to act and to act without delay. He may be compared to the man who finds himself floundering in the water. He is not so interested in discovering the route that led him into the predicament as he is in finding one that will take him out of it.

During the paroxysm of the convulsion the physician should not permit the attendants to attempt to restrain the convulsive movements. If the patient is kept from biting her tongue and from falling from the bed, sufficient has been done in this respect. The object of the treatment is to quiet the convulsions and to remove the cause. Authorities differ as to which of these should be first attempted. The remedies as set forth by the text-books are chloroform during the paroxysm, blood-letting to depletion, morphia hypodermically in large doses, the bromides, chloral hydrate, preferably by rectum with milk, veratrum viride, pilocarpine hypodermically, cold applied to the head, hydragogue cathartics, pressure over carotids, hot baths, and, if labor is in progress, early termination of the same.

Now, probably all of these remedies are of value, but the object of this paper is to call attention to one in particular. That one is blood-letting. It is not recommended that this procedure should be employed to the exclusion of the others. It is recommended, however, that it should be given first place in the list of remedies for this disease. The cause of death in eclampsia is injury to the brain from intense cerebral congestion. Now, what is more reasonable than that lessening this pressure will reduce this danger. Bleeding certainly reduces the pressure. If it did nothing more than this its value would seem to be established. But it does much more. It lessens the blood pressure without delay, a most important point when we call to mind the fact that puerperal convulsions, as a rule, increase in violence directly as they increase in number. A third benefit is found in this, that it removes from the system a greater or less quantity of poisonous materials—which materials certainly have some part in causing the convulsions. Another and most important benefit has been claimed for this procedure, namely, when labor is in progress it hastens the dilatation of the os. This is equivalent to saying it hastens the termination of labor whether forceps are used or not. By talking with his medical friends, and by reading cases reported in the journals, the writer is convinced that the true value of blood-letting in puerperal convulsions is underestimated.

That this should be so is not because the writers and teachers of the obstetric art have failed to recommend it. Of the writers on this subject whom the writer has been able to consult, Playfair is the only one who opposes it. He thinks the benefit from blood-letting in this class of cases is temporary. He also thinks it has a tendency to cause a return of the convulsions, more violent in character than the earlier ones. On the other hand, Cazeau and Tarnier consider "sanguineous emissions" the most valuable form of treatment that can be

resorted to under any form of the disease. M. Depaul thinks even as much as sixty ounces of blood should be taken away within a few hours. Fordyce Barker says, bleed at once when the attack comes on, before labor, and when central congestion occurs. As central congestion is the great cause of death in all these cases, the rule is taken as a general one. W. Tyler Smith recommends bleeding, first, because it acts as a sedative to the spinal cord, and second, because by this plan the brain is preserved from injury. Hodge says no treatment is so valuable as immediate loss of blood. Parvin says, bleed to depletion.

Dr. John T. Meacham, of Racine, Wisconsin, read, at the meeting of the American medical association at Nashville in 1890, a paper under the following heading: "Report of Fifteen Cases of Puerperal Eclampsia." Of these cases fourteen were bled freely, to the extent of from fifteen to twenty ounces. The one not bled had been in convulsions for a long time and was not seen by Dr. Meacham until she was nearly dead. Of these fifteen cases only two died, and one of these was the patient who was not bled. In all but two of the cases the convulsions came on during labor. Both the others came on after labor. In two cases convulsions of mild degree followed the bleeding. In both these there was a second bleeding of a few ounces. This was done by removing the compress from the original incisions. The convulsions were by this means controlled. In nine of the thirteen cases of convulsions during labor forceps were used to complete delivery. The maternal mortality in the fourteen cases where bleeding was practiced was seven and one-seventh per cent. Dr. Meacham felt certain the bleeding caused relaxation of the os, and permitted a much earlier use of the forceps than would have been possible without the previous bleeding. The closing part of the paper is as follows: "Dr. Meigs says that the first thing to be done in these cases is to remove the cause by delivery, and the second, to moderate the effect by venesection and evacuants; but my own experience is just the reverse. Bleed first and deliver afterwards, as few cases will allow the application of the forceps until some relaxing means has been first resorted to." Of course, fifteen cases cannot be taken to prove much for any particular line of treatment, yet a maternal mortality of seven and one-seventh per cent. in cases bled freely is in strong contrast to a mortality of thirty per cent. where cases are submitted to different forms of treatment.

A few years ago, Dr. C. H. Johnston, of Sutton's Bay, Michigan, now of Grand Rapids, reported in that most excellent medical magazine, The Physician and Surgeon, a history of four cases of puerperal eclampsia, which occurred in his practice within a period of six months. In two of these cases the convulsions came on before, in one during, and in one after labor. Three were primiparæ. In all gestation was at full term. The treatment was most thorough—morphia, chloral hydrate, bromide of potash, elaterium, cold at the head, and in one case, bleeding to the extent of a few ounces. Three of these cases, including the one who was bled, resulted fatally. Four cases cannot be taken to prove much for or against any form of treatment; yet a maternal mortality of seventy-five per cent., where bleeding plays almost no part in the treatment, is in strong contrast to a maternal mortality of seven and one-seventh per cent. where bleeding is the main support.

The following has an indirect bearing on the subject under consideration. Dr. Samuel Wilks, one of the older physicians at Guy's hospital, wrote as fol-

lows in a recent number of the *Lancet:* "A young woman was brought into the hospital in a dying state, gasping for breath, and livid; there was a mitral bruit, engorgement of the lung with hæmoptysis, albuminous, scanty urine, and dropsy. We bled her from the arm and the effect was immediate—the breathing became tranquil, lividity passed from the face, and improvement continued from that time. In cases of *uræmic convulsions* the effects of bleeding are very striking: the right heart is relieved, and poisoned blood is removed from the system.

"One case of this kind, indelibly fixed in my memory, is that of a dressmaker, who, I believe is still alive. I was asked a few years ago to see this patient, who had been in convulsions all night. I found a middle-aged woman in constant convulsive movements, froth issuing from her mouth, quite comatose and almost pulseless. The whole body was livid and the extremities cold. The doctor said she was dying, and allowed me therefore to bleed her. I took away a small wash hand-basin of blood, and while yet flowing, the lividity passed off, the convulsions ceased, the body gradually became warmer. Her life was as clearly saved by the bleeding *as if I had dragged her drowning out of the water*, and this is more than I can say of drugs."

A summary of the treatment of puerperal convulsions, partly stated and partly implied in this paper, is: first, remove possibility of reflex irritation by using the catheter; second, bleed freely, to the extent of from fifteen to twenty ounces. Repeat bleeding if convulsions are not controlled by the first. Follow this with hydragogue cathartics and sedatives. When labor is in progress it should be terminated as soon as possible. If the heart's action becomes weak through loss of blood a warm enema of a weak solutions of salt and water should be given.

Now, the writer of this paper makes no pretension to having made an exhaustive investigation into this subject. His object has been to call attention to the fact that the profession is divided in regard to the causes of this most frightful disease. Also to mention a line of action for its treatment that has the sanction of a majority of the leaders of the profession and at the same time to be of a practical nature. He thinks the treatment recommended above has both these characteristics.

INTRA-UTERINE AMPUTATION.*

By J. A. WESSINGER, M. D., Ann Arbor, Michigan.

The author has ventured to bring before the society a somewhat interesting specimen designed as the subject matter for this paper, and presented in illustration of the rather curious condition known to the profession as intrauterine amputation of the fœtal extremities.

As has just been stated, authorities are pleased to describe this condition as an amputation, thereby leading the practitioner to infer that certain adventitious processes, either of the cord or fibrinous bands, have been at work at some period of the pre-natal existence of the fœtus. In thinking upon the subject under consideration several questions have occurred to me, which, although they

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

have all been carefully gone over by gentlemen eminent in the science and practice of obstetric medicine, yet can be gone over again, I trust, with much profit to us all.

(1) Can the cord sever a fœtal extremity?

(2) What evidence is there to show that the so-called fibrinous or inflammatory bands produce the condition in question?

(3) Is there good evidence to believe that any amputating process is at work in these cases?

It would seem that the umbilical cord could have very little, if any, influence as a factor in producing an amputation of a fœtal extremity, even though the process were begun in the early periods of development, because, as is well known, the cord does not have a distinct existence until the end of the first month of embryonic life and it does not assume its function until the end of the third month, when the fœtus begins to derive its nourishment from the maternal blood. We find also at this time that the fœtus has undergone considerable development, since it has been proven that as early as the first month, "the bones of the limbs are laid down as cartilages which appear as separate differentiations of the more centrally placed mesoblast, a portion of mesoblast remaining for a time undifferentiated opposite each synovial articulation." So, that, by the end of the third month in passing through a fœtal limb, there would be found considerable bony development, and therefore at this early period it would seem well-nigh impossible for the cord to produce so extensive a lesion as an amputation of an extremity, without proving disastrous to the life of the fœtus itself.

As to the rôle that the so-called fibrinous or inflammatory bands play in producing the condition in question it is somewhat difficult to ascertain, since direct positive evidence in the majority of cases seems to be wanting. It is, I think, the current view of authorities that when these fibrous bands and adventitious membranes are formed it is owing to a *diminution* of the quantity of amniotic fluid, but we find in the author's case and in several others reported that there was present a condition of hydramnios, an *enormous* increase of the quantity of liquor amnii, and hence these cases, would argue against the production of the anomaly through inflammatory action.

In the study of the literature bearing upon this subject I have been able to find twenty recorded cases of abscence of one or more of the fœtal extremities at birth. But while all of these cases have been reported as supposed pre-natal amputations, none of them offer any positive proof that such was the real cause. Such proof would only be established by the presence at birth of the severed member, which, in the records above referred to, has not been claimed, yet cases are on record where the extremity has been found mingled with the uterine contents at delivery. But this has been very uncommon and hence it must be admitted that intrauterine amputation is a rare occurrence.

In 1824 Watkinson, of England, "attended a woman in her first labor who had experienced nothing unusual during her pregnancy. The child was born prematurely and lived but twenty minutes. Its left leg appeared to have been amputated just above the malleoli. The foot, smaller than the other, was found in the vagina, but presented no appearance of gangrene or alteration of color or consistency." Since that time Montgomery, in a work on this subject, relates

two cases very similar to the preceding, in which the detached feet were expelled before the child. Chaussier relates three cases where the severed members were found in the parturient canal during delivery.

If an amputating process is a rare occurrence in these cases, and since these anomalies are quite common, it follows that we must look for other causes by which to account for loss of the fœtal extremities. Other causes have been brought forward. Prominent among these is the theory of arrest of development. This I accept as the most reasonable, because a great preponderance of proof can be brought to bear in its favor. I desire, therefore, to speak more fully upon this particular phase of the subject using as a basis some of the more recent facts of embryology. In pursuing the study of this subject I have derived much valuable information from the works of Professors Schäfer and Geo. D. Thane, in human embryology, and also from those of Professors Foster and Balfour in comparative embryology. According to these authorities I find that "the limbs arise as outgrowths from the lateral part of the trunk in the thoracic and pelvic regions, in the third day in the chick, and in the third and fourth week in the human embryo. They appear as flattened simi-lunar thickenings of the parietal mesoblast covered by epiblast, budding out from a lateral ridge which is seen in the early embryo near the line of cleavage of the mesoblast and close to the outer margins of the muscle-plates, and several of which subsequently send prologations into each limb; they are, therefore, connected with several mesoblastic somites, as is also indicated by their nerve supply. From the manner in which the flattened limb-bud grows out from the lateral ridge, it is obvious that its surfaces must at first be dorsal and ventral. The dorsal surface afterward becomes extensor and the ventral flexor. The anterior edge is respectively the radial and tibial; the posterior, the ulnar and fibular. As development proceeds, a half rotation occurs in opposite directions in the two limbs, resulting in the middle flexure (elbow, knee) being directed forward in the upper, backward in the lower limb." The point in this quotation that bears directly upon this subject is the fact that the fœtal limbs are developed by a gradual unfolding or budding process. This being true, it also follows that this process can be arrested at any stage of the developmental effort.

Now, if you will look at this specimen for a moment you will find an absence of the entire left arm, and also absence of the left eye, together with absence of two toes of the left foot and one toe of the right foot. I believe with reference to these members that at no time during the life of this fœtus was there an effort made at their development; that the material elements that should go to establish a future budding process, were never laid down. If this be true of these absent members then it must also be true as regards the right forearm, that the materials for its development were wanting, and hence an arrest of the budding process at or near the elbow-joint. An interesting question presents itself at this point. Why should there be this arrest of development? How do we account for this? This leads me into the ultimate and to a consideration of the principle or theory of degenerative hereditary taint, "which is to the effect that a change in the structure of any part of an organism is chiefly brought about by exposure to new conditions of life inducing a change in habits." According to Lamarck, this principle explains why the swan has a long neck and webbed feet, and why the proteus has become eyeless. The experiments of

Brown-Sequard are interesting in this connection. This observer showed that certain guinea-pigs transmitted epilepsy to their descendants after injury to the spinal cord; "whilst others (after injury to the sciatic nerve, leading them to gnaw off their own toes) gave birth to toeless guinea-pigs." An interesting case in point is reported from France, in which every member of every family for five generations is the subject of some malformation either in the presence of supernumerary fingers and toes or in the absence of certain portions of the extremities. However interesting this subject might be to the biologist, it is not yet well established that a mutilation, at least in the higher animals, is transmitted. Another factor in the causation of the condition in question is endarteritis obliterans, a pathological process supposed to be established through specific hereditary taint, and as a result of this cutting off of the blood supply, the extremity becomes gangrenous and is lost.

A CASE OF ACUTE INFLAMMATION OF THE MIDDLE EAR: EXTENSIVE MASTOID CARIES, WITHOUT LOCAL SIGNS OF INFLAMMATION.—PYÆMIA, DEATH.*

By COLLINS H. JOHNSTON, A. M., M. D., Grand Rapids, Michigan.
VISITING PHYSICIAN TO SAINT MARK'S HOSPITAL.

Acute purulent inflammation of the middle ear runs its course in the majority of cases without complications. In some instances, however, complications arise, which are much more serious than the primary malady. The symptoms of mastoid disease usually become very manifest at once, and are likewise so characteristic, that a brief report of the following unique case cannot fail to be of interest.

Sunday morning, May 31, 1891, Mrs. G. N. W., aged forty years, was seized with pain in the right ear, while in church. This increased in severity during the afternoon, and at 10 o'clock P. M. I was called to see her. The patient was a strong, energetic woman, whose usual excellent health had been somewhat impaired for a year or more, but without any assignable cause.

During the preceding spring she had been confined to bed a couple of weeks with an attack of la grippe, which was attended with an obstinate prostration, lasting several weeks. She was suffering greatly when I arrived at her bedside. Her temperature was 100°, pulse 90, the ear and surrounding parts were tender to the touch, and all the symptoms of an acute process in the middle ear were present. I ordered the hot douche to be used every hour; left some cocaine, which I happened to have with me, to be dropped into the ear *pro re nata*, and administered an anodyne. Monday her pain was even greater than the evening before, and as the tympanic membrane was congested and bulging, I performed paracentesis. This was followed by a little bleeding, the escape of a small amount of muco-purulent secretion, and immediate, though not complete, relief from pain. For the next two days the ear discharged freely, and with the exception of an occasional twinge of pain, the patient was comfortable, though exceedingly restless. On the afternoon of the 3rd of June the patient had a slight chill, and on the 4th a hard chill, followed by a temperature of 104.8°,

* Read before the Michigan State Medical Society, at Flint, May, 1892.

pain in the back, arms and legs, and a general sense of soreness throughout the body, as often seen in influenza. The head, and ear which was discharged freely, were, however, free from pain. On the 5th, Dr. Eugene Boise kindly saw the patient with me. Her temperature was 103°, pulse 90. The ear and surrounding parts were free from pain; the discharge from the ear was profuse, and there was a large perforation in the posterior and lower part of the drum-head. She had no headache, but the general muscular soreness had increased, especially in certain parts of the forearms and thighs. Her bowels were loose and abdomen somewhat tympanitic. We were unable to make a satisfactory diagnosis. During the next four days her condition continued about the same; she had a chill once or twice a day; the ear discharged freely; there was no tenderness about the ear or head; the temperature fluctuated between 101° and 104°. On the 9th, for the first time, she had for a few hours a general headache, and complained of being nauseated.

On the 12th her temperature, after a hard chill, reached 106°. The following day, Drs. George K. Johnson and D. Milton Greene saw the patient with me. We agreed that she was suffering from pyæmia, due to absorption from the middle ear or mastoid cells, although there were absolutely no local signs of disease in the latter. The propriety of an operation was discussed, but it was decided to defer it a few days and await developments. On the 14th, for a few hours, the patient had a slight unilateral headache. Her general condition, however, decidedly improved. She took nourishment well; slept well; had no pain in head, and but little in body; no chills, but slight aural discharge; the temperature daily became lower, and on the 17th was normal during the greater part of the twenty-four hours. The patient sat up a little that day; spoke of soon getting out of bed, and everything pointed to a speedy convalescence. During the next few days, however, she did not feel so well. The discharge from the ear increased; the temperature varied from 99° to 101°; the soreness of the arms and thighs increased; and on the 21st I called Drs. Johnson, Greene and S. C. Graves to see the case, and took the necessary instruments for opening the mastoid cells. Drs. Johnson and Graves did not think the symptoms were due to mastoid implication, and were opposed to opening the cells. Dr. Greene was of the opinion that an operation offered the only hope of saving the patient's life, and favored its performance. To settle the point, I summoned Dr. G. E. Frothingham, from Detroit. Dr. Frothingham, after examining the case carefully, on two occasions, decided that there were no indications of mastoid disease, and declined to operate. He thought the pyæmia came from direct absorption from the middle ear, and gave an unfavorable prognosis.

For the next week the patient's condition remained about the same. She complained much of nausea, and vomited occasionally. The ear continued to discharge freely; the temperature fluctuated between 99° and 104°; there was no pain in ear or head; no chills for about a week. On the 29th her right knee began to swell, and became exceeding painful, requiring ice-bags and morphia. The patient now began to show marked signs of failing. Her pulse, which, until now, had remained under 100 and fairly strong, became more rapid and weak. During the next two weeks seven or eight large abscesses were evacuated, involving the right knee-joint, right thigh, left thigh, right buttock and right forearm. These abscesses discharged profusely, and made no attempt at repair; the

temperature seldom rose above 101°; the aural discharge had about ceased; there was no headache, or pain or tenderness about the ear; the pulse steadily became weaker, and the patient rapidly failed. On the 16th of July she had two chills, followed by some general headaches, and a confused feeling in the head; was dull and drowsy, but restless, and vomited occasionally. On the 18th, a profuse diarrhœa set in which, on the 19th, became involuntary. The patient's mind remained clear until the evening of the 20th. Death occurred at 6:25 A. M., July 21, after an illness of seven weeks and two days. During the last few days there was no discharge whatever from the ear.

The post-mortem was made by Drs. Greene and Graves. From the notes of the latter I quote the following:

(1) Dura mater, normal.

(2) Arachnoid œdematous, particularly over the vault and somewhat on sides.

(3) Pia mater congested; some fluid in subarachnoid spaces.

(4) Encephalon, healthy.

(5) Right lateral sinus, as it lay alongside the posterior border of petrous portion of temporal bone, was filled with a thrombus and showed signs of suppurative inflammation.

(6) Mastoid cells, right side, presented evidences of a pre-existing suppurative inflammation; they were full of pus, and necrosis was very evident.

(7) Middle ear same as mastoid cells.

(8) Internal ear inflamed; no suppuration.

Here was a case of entire absence of any one of the well-known signs of mastoid disease. At no time during the illness (after the first day or two), was there pain, tenderness on pressure, swelling, or redness of the skin, over the mastoid. The well-known case of mastoid disease reported by Knapp several years ago, which terminated in death, without operation, presented an absence of signs of disease in the mastoid region, but gave rise to pain in a distant part of the head, and abscesses over the occipital bone.

F. Tilden Brown at the same time reported a somewhat similar case of abscess of the mastoid, with absence of tenderness, heat or swelling over the suppurating part, but "with a constant distant pain near the occipital protuberance," in which evacuation of the abscess saved the patient. None of these signs were present in my patient, nor were the indications for operative interference laid down by Schwartz present, namely: "Bulging of the skin covering the upper and posterior wall of the external meatus, retention of pus in the middle ear, with pain in the region."

There are four results of suppurative media which may come under the notice of the surgeon: (1) Mastoid abscess; (2) Abscess of the brain or cerebellum; (3) Meningitis; (4) Thrombosis and pyæmia.

We all know that phlebitis and thrombosis are prone to occur in the vessels of a tissue which is the seat of suppurative inflammation. The mucous membrane of the middle ear is in immediate relation with the lateral sinus, the net-work of veins surrounding the internal carotid artery, the internal jugular vein, a portion of which lies exactly under the floor of the tympanic cavity, and the superior petrosal sinus which is situated directly above the roof of the middle ear. The osseous partitions separating these vessels from the middle ear are sometimes very thin, and are perforated by openings for connective tissue, vessels, and nerves.

Free inter-communication takes place in the interior of these bony partitions, between the vessels of the dura mater and the mucous membrane of the middle ear: so that morbid changes in the walls or contents of either set of vessels are pretty sure to be propagated to the outer set. (Barr). Hence, if thrombosis or phlebitis exist in the vessels of the mucous membrane of the middle ear, the conditions are quite favorable for the propagation of disease directly to the lateral sinus, the superior petrosal sinus, or the bulb of the internal jugular vein.

The symptoms of thrombosis and pyæmia, such as chills, oscillations of temperature, sweating, etc., made their appearance upon the fourth day of the disease, and it is not probable that an operation made at any subsequent time would have averted death. When Dr. Frothingham saw the case the patient had for two days complained of pain and tenderness upon the right side of the neck, and a distinct hardness could be felt along the inner edge of the sterno-mastoid muscle, in the course of the internal jugular vein. Had there been good reason, however, to suspect retained pus in the mastoid cells, the operation would have been performed, since it would have given the patient the only possible chance of recovery. But not only was there absence of the distinctive signs and symptoms of mastoid disease, but all of the symptoms present were fully and more rationally explained upon the hypothesis of direct infection from the middle ear.

THE SHURLY-GIBBES TREATMENT OF TUBERCULOSIS.*

By E. FLETCHER INGALS, A. M., M. D., Chicago, Illinois.

The iodine, and gold and sodium bichloride treatment of tuberculosis, more commonly known as the Shurly-Gibbes treatment, originated with Drs. E. L. Shurly, of Detroit, and Heneage Gibbes, of Ann Arbor, in the fall of 1890, and was the outcome of numerous experiments which they had made on animals.

Owing to the furor created by the announcement that Koch had discovered a remedy for tuberculosis, some enterprising newspaper men who had heard of Dr. Shurly's experiments, succeeded in obtaining from the report of the medical society of Detroit and from the Harper hospital, certain facts with reference to his researches; these facts when amplified and illuminated by the brilliant imagination of the reporters, made many columns in the daily press, which were sent out to all parts of the country. The craze over Koch's tuberculin kept alive the interest in Shurly's treatment and caused numerous physicians in various parts of the country to give it a trial.

In the early part of January, 1891, I visited Detroit to investigate Dr. Shurly's methods, and was so favorably impressed by the result of his experiments upon animals and the apparent improvement of a number of patients who had been treated upon the same principle, that I returned home and at once began the use of these remedies with nearly all of my phthisical patients. Since that time I have treated in private practice over two hundred cases of pulmonary phthisis, many of whom have received this treatment. Not wishing to subject these

*Abstract of a paper read before the American Climatological Association, at Richfield Springs, New York, June, 1892.

patients to the chance of experiment, I carried out the treatment thoroughly, but only as an adjunct to other measures, which seemed to me suitable. Indeed, during all my subsequent use of this form of medication it has been so associated, and therefore the results of treatment cannot be ascribed wholly to the iodine, or gold and sodium bichloride; however, the outcome of these cases has appeared so much more favorable than those treated by other methods alone that they seem to me worthy of record, and sufficient to give a fair basis for estimating the true value of this method.

In the beginning I recommended the treatment for nearly all patients, but after a short time I became convinced that it was of no great value in advanced cases, and ceased to employ it excepting in cases which had not progressed beyond the second stage of the disease. As a rule I have not since recommended it in cases where the disease had extended beyond the upper lobe of one lung, even though cavities had not yet formed. A considerable number of these patients I have seen but a few times, some not more than once, and in many instances only a few hypodermic injections have been employed; therefore only comparatively few of the two hundred cases can properly be considered in studying the effects of the treatment.

As nearly all patients suffering from phthisis consider themselves better and often appear better for the first two or three weeks under any new treatment, or that recommended by any new physician, I have excluded from my list for analysis, all cases except those in whom the treatment was continuously employed for more than five weeks. Of these I find very complete records of forty-two, an analysis of which will, I believe, enable us to form a fair estimate of the influence of the treatment upon the progress of tuberculosis. Although the effect of other remedies cannot be excluded, I feel safe in the assertion that many of these patients have done much better than former experience would have led me to expect; and I believe these results are largely due to the tonic and alterative effects of the iodine, and gold and sodium bichloride. I am confident that none have been injured by the remedies.

In the list I have presented all cases of pulmonary phthisis that I have treated in this manner for a period of five weeks or more without regard to the origin, stage, course, or result of the disease. Of the forty-two cases I shall report, many received no benefit; several were apparently benefitted for a short time in a way that could hardly be accounted for by mental impressions; quite a large percentage were much improved for several months, and in eighteen per cent. the disease appears to have been arrested. I have classified as arrested all those cases in which the progress of the disease in the lungs has been checked for several months, in which the general health continues good, and the cough and other symptoms have nearly or quite disappeared. I think it probable in all such instances careful physical examination would still reveal evidences of consolidation, though to much less extent than when the treatment was commenced.

In some of the list of cases the diagnosis has been based upon the symptoms and physical signs only, there having been no microscopic examination of the sputum, and a few have been diagnosticated as tubercular, even though microscopic examination failed to detect tubercle bacilli. In some of the cases, classified as arrested, the bacilli may still be found when purulent sputum can be

obtained; in others it has been impossible to obtain sufficient sputum for examination, and in still others the bacilli cannot be found. The treatment has not appeared to me to destroy or change the appearance of these germs. I have not classed any cases as cured, believing that in a disease like pulmonary tuberculosis, no patient can properly be counted cured, who has not been free from all symptoms and signs of the disease for at least two years.

An analysis of these forty-two cases shows that fourteen or one-third received no apparent benefit, but it also shows that twelve of these were far advanced when they first came under my care. Fourteen others were apparently decidedly improved for some time, but ultimately they grew worse, and six of them have since died. Of the fourteen cases that were not improved, I believe that all are dead. Six of the forty-two cases are noted as much improved; all of them have been under observation for many months, and I believe that they are, with one exception, all doing well at present. Four of these when first seen were in the early stages of the disease having been ill but a few months, and some of them will probably recover. Of the forty-two cases eight are noted as arrested. All of them are at present in good health, though in those where the sputum has been examined recently, of which there are four, the bacilli continue, and in all these four and possibly in others there is still expectoration of a small amount of muco-purulent sputum every day, amounting possibly to half a drachm.

It will be seen that whatever the results of the treatment, it does not destroy the tubercle bacilli, a fact which was established early by Dr. Shurly himself. During the last few months I have discontinued the use of chlorine as an inhalation, substituting it in most instances by inhalations of iodine, which has seemed to me more beneficial.

It will be seen by the analysis that in a little more than nineteen per cent. the disease has been arrested. In about fourteen per cent. the patients have been greatly improved, and in thirty-three per cent. they were apparently benefited for some time, though they ultimately failed. It will be noticed also that nearly all of the patients who were not benefited, were already far advanced in the disease, when first given the treatment, and that the majority of those who have been treated in the inception of the disease have been greatly improved or have recovered. But it will also be observed that the treatment is not entirely valueless in some advanced cases.

Considering these facts, I think I am justified in believing that we have in the Shurly–Gibbes treatment for tuberculosis a method of great value in incipient cases, which adds much to their chances of recovery. I do not think we should rely upon it alone in any case, but personally I would feel that I had not done my patient justice if I had not given him the benefit of its trial, providing the disease of the lung had not extended below the third rib, when he first came under my observation. While the treatment may occasionally prove beneficial in advanced cases, I would not recommend it to such patients, excepting where they desired to try it after the chances had been fully explained. In only one of the cases reported was a history of previous syphilis obtained, and this case was so clearly tubercular, that I did not hesitate to place it in this list; but it is at once apparent that where doubt as to the tubercular or specific origin of pulmonary disease existed, this would be an appropriate treatment for trial.

TRANSACTIONS.

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STATED MEETING, JUNE 13, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. T. A. MCGRAW presented (1) Four or five calculi removed from the bladder of a man sixty years old—good recovery; (2) A number of gall-stones removed from a patient with following history: The patient first began to have trouble about twelve years ago and when he came to me he came complaining of a tumor of the abdominal wall. And in the wound resulting from its removal were found these calculi. The man had had biliary colic sometime previous to the date of this operation. The gall-bladder must have come into contact with the abdominal walls, become inflamed, adherent, and finally ulcerated through, allowing the deposit of the biliary calculi in the abdominal walls. The calculi were found in a closed sac.

DR. DELOS PARKER: How long did the trouble exist, and was the man incapacitated for work?

DR. MCGRAW: The patient had complained for twelve years and was not laid up all the time.

DR. GEO. W. STONER: How did the gall-bladder close up?

DR. MCGRAW: We must merely theorize upon this question. The patient had gall-stones and inflammation of the gall-bladder was set up. Ulceration followed. The gall-stones passing into an incapsulated pocket. The pus must have escaped in some other way, and finally adhesive inflammation closed up the gap.

DR. TILTON: This is a unique case.

DISCUSSION OF PAPERS.

DR. DELOS PARKER read a paper entitled "A Line of Action in Puerperal Convulsions." (See page 388).

DR. F. W. ROBBINS: I am very much interested in this paper because I read one upon a similar subject two or three years ago in which thirty or forty or fifty grain doses of chloral hydrate was recommended as the best line of treatment. Three cases were so treated and two died. One was bled and she died. Chloral is good and I think it acts in the same way as bleeding. I would first resort to chloral and then to bleeding.

DR. ANDERSON: I recall the teaching of DR. MCLEAN, of New York, who says that a frog which has been poisoned by strychnine if left alone will get well, but if it is irritated the convulsions will continue and the animal will die. The same may be said of a woman the subject of puerperal convulsions. Chloroform should be administered and the bladder and rectum emptied while the patient is anæsthetized. Premature labor should be induced under chloroform.

DR. ALONZO BRYAN: I call to mind a woman who had been confined one week before I saw her. She had had intense headache and then had puerperal

convulsions every fifteen minutes or half hour. Full doses of morphine and chloral were administered, but the convulsions continued unabated. I bled her to twenty-four ounces and she immediately recovered. Therefore bleeding is indicated especially when there is a good deal of headache.

DR. J. H. CARSTENS: In ordinary cases of kidney diseases we do not always find albumin. Therefore, in cases of puerperal convulsions the absence of albumin in the urine at one examination does not prove the absence of kidney disease. All cases in my experince had some kidney trouble. I do not think that the absorption of ptomaines from the intestinal tract plays any important part in the etiology. The kidneys are always at fault. I have used bleeding and it acts well by relieving the blood of some of its excrementitious matter but the same results can be obtained by other lines of treatment. If the convulsions come on after delivery the case is a very serious one. I have found it necessary sometimes to remove the contents of the uterus and have had good results. Some cases, as FORDYCE BARKER says, are hysterical. In the apoplectiform variety we have an effusion into the brain almost immediately and it is almost always fatal. We have also the ordinary congestive variety of convulsions. There is, therefore, a number of different kinds of puerperal convulsions, and in that variety in which the brain is anæmic and the meninges congested, bleeding is especially indicated. Chloral in doses as large as two drachms may be given together with strong cathartics and other eliminatives, such a pilocarpine, hot bath, or the wet pack. Give cathartics that act quickly and well such as croton oil, of which I am in the habit of giving five or six drops thus getting a strong chologogue action in half an hour, which together with the profuse perspiration relieve the kidneys, and if necessary I quickly bring on labor. Many of these cases, as in one I saw in consultation within a few days, died of puerperal fever later on. It may be that the efforts to bring on premature labor and perhaps the neglect of antiseptic precautions may account for the large percentage of the subsequent deaths from puerperal fever.

DR. ALONZO BRYAN: In the case I reported I also used croton oil and sulphate of magnesia and in spite of these it went on from bad to worse.

DR. E. W. JENKS: Puerperal convulsions may be divided into the three following varieties, although it is difficult to draw a strict line of demarcation between them: (1) Hysterical; (2) Epileptiform, and (3) Apoplectiform. The first variety is easily controlled by simple remedies, such as morphine hypodermically. The epileptiform variety is due to some poison affecting the nerve centers or it may be of a purely reflex nature. Here chloroform and chloral hydrate do well. In many cases of the apoplectiform variety no matter what we do our patient will die, especially when the convulsion comes on after delivery—blood-letting would be indicated here. I call to mind a patient—a spare built, small, lax-fibred, but well-nourished woman, was delivered of a pair of twins. Convulsions came on notwithstanding cathartics, chloral and chloroform were given, but no benefit could be obtained. The skin was cold and blue, pulse, 50. A pint of blood was removed and the woman got well quickly. One must recognize the different forms of convulsion and act accordingly. I will allude to another case—a woman twenty-five years of age was under my care, and in doing an operation for her it was necessary to administer chloroform. While under the influence of the anæsthetic my assistants and myself perceived the effects of a

peculiar condition of the cerebral circulation. Soon after this she became pregnant and was delivered during my absence from the city. Chloral, cathartics and chloroform were given without avail. Had she been bled she might have been saved. We can have no fixed rules for this or any other pathological condition.

DR. DELOS PARKER: Nobody has claimed that blood-letting will do any harm. Blood-letting is no doubt neglected in these and other pathological conditions. The chief good obtained from blood-letting is obtained from lowering the blood pressure in the brain. We should always be prepared to meet this awful exigency of obstetrical practice. Blood-letting is an important adjunct to our armamentarium and can be quickly applied.

REPORTS OF CASES.

DR. TAPPEY: A case of appendicitis. I proposed an operation but the people would not consent and the patient died. Upon post-mortem no appendicitis was found but there was a perforating ulcer at the head of the cæcum. This case has an important bearing upon the question of appendicitis. It was said in the society some weeks ago that any morbid action round about this region had its origin and focal point in the appendix vermiformis, but in this case the appendix was normal and the pathological changes were confined to the cæcum.

DR. MCGRAW: Was the abscess free or incapsulated?

DR. TAPPEY: Free. The patient had a history of hæmorrhage from the bowels. He was very low when we saw him.

DR. MCGRAW: I have just seen and operated upon a case of appendicitis. Three years ago this patient had an attack of appendicitis. She apparently recovered. Three days ago she was apparently well. Suddenly she had a sharp chill, pain in the epigastrium, vomiting and collapse. Peritonitis developed in the lower abdominal cavity. When seen the patient was very low. The abdomen was tender, slightly tympanitic and doughy. Temperature 101½°; pulse 100. I performed the operation. The abscess had opened into the abdominal cavity instead of as it usually does into the cellular tissue. In cases where the vermiform appendix forms part of the abdominal wall, separating the peritoneal cavity from the abscess cavity, it is my practice not to remove the appendix. If it is possible to get at the abscess evacuate it, cleanse the cavity and thoroughly drain it without opening the peritoneal cavity. Even if you do leave the appendix it is better to do so. In the case to which I just referred the abscess had already found its way into the peritoneal cavity. I opened into the abdominal cavity, removed the appendix, flushed the peritoneum with sterilized water and put in drainage. I will from now out flush the abdominal cavity with peroxide of hydrogen, thus thoroughly disinfecting it. If you have symptoms as detailed above you must operate immediately if you wish to give your patient any chance of recovery.

DR. A. P. BIDDLE: What is the etiology of these cases?

DR. MCGRAW: It is usually supposed to be some foreign body or impacted fæces lodging in the appendix or cæcum.

DR. CARSTENS: We wait too long; we should operate quickly to avoid adhesions because lymph is quickly thrown out upon the surface of the peritoneum. DR. TAPPEY'S case is one that shows clearly that we should operate

early and quickly. I saw this case one year ago and wanted to operate then but patient would not let me. He went from bad to worse and finally died. If he had been operated on he might have been saved.

DR. F. B. TIBBALLS: I saw a case about an hour ago in which the operation that DR. MCGRAW has just advised was done three years ago and now the boy has a recurring appendicitis. The cause of the trouble was not removed at the time of the operation.

DR. MCGRAW: We should not remove the appendix while it forms part of the wall of the abscess. If later on I find that recurrence begins to show itself I would remove the appendix before pus had formed, but I certainly would not remove it at the time the abscess cavity was full of stinking, fetid, infectious pus. If, however, recurrence showed itself, I would remove the appendix.

DR. STONER: Can you always distinguish between appendicitis and inflammation of the cæcum.

DR. MCGRAW: It cannot always be done.

DR. STONER: A patient was recently sent to me who had a fistula in the lumbar region communicating with the bowel, the result of a former operation. By stimulating injections it seemed to do well, but the fistula is still open and thin fæcal matter still finds its way through it.

DR. MCGRAW: An abscess in the cellular tissue, if it communicates with the peritoneal cavity, is very much worse than a circumscribed abscess in the peritoneal cavity, because you can dispose of the latter thoroughly, but if you allow the sloughing cellular tissue to communicate with the peritoneal cavity you have a very bad state of affairs and there is little hope for your patient. It is bad practice to risk any communication between this necrosed, sloughing, infectious, gangrenous abscess, and the peritoneal cavity.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, JUNE 20, 1892.

THE PRESIDENT *pro tempore*, H. W. LONGYEAR, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. E. W. JENKS presented the following five interesting pathological specimens: (1) Tubes and ovaries removed from a woman thirty-four years old. She had been in ill health for nine years and her trouble had been variously diagnosed by different physicians as follows: peritonitis, cellulitis, pelvic tumor, and cancer. The operation was a very difficult one on account of the great development of adipose tissue, four inches being found in the abdominal wall and one in the peritoneum. During her recovery, which was a perfect one, several abscesses formed in the abdominal wall. Six months after the operation she returned to me with another abscess in the abdominal wall, which upon being evacuated disclosed this ligature which was the one with which I had tied the pedicle; (2) Ovaries and tubes removed from a woman thirty-three years old, the mother of three children. Had been sick a number of years. She had been a great sufferer but was the picture of health. Both ovaries were removed. Upon one side the ovary was cystic and upon the other there was a hæmatoma—recovery; (3) A woman twenty-eight years of age, the mother of three children.

She had a dislocated, adherent and sclerotic ovary—recovery; (4) A woman, aged twenty-two, no children. She had an acute pelvic peritonitis and an operation was done as a last resort. The patient had a temperature of 102° and she was almost in extremis. Pus tubes containing two ounces of pus were removed. It was necessary during the operation to use stimulants freely. She died on the second day; (5) A woman, aged twenty-one, unmarried, showed symptoms of hip-joint disease. She became a morphine fiend, finding it necessary to use large quantities of morphine daily to subdue her pain. I placed her under chloroform and the hip-joint was found perfectly healthy. One ovary (the one upon the opposite to that on which the greatest pain in the leg was felt) was found enlarged and dislocated. The other ovary was found sclerosed. Both were removed and the recovery was a perfect one. In all these cases strict antiseptic principles were adhered to carefully. The temperature hardly rose above the normal and morphine was not employed in any of them. In case number five the enlarged and dislocated ovary was found upon the opposite side to where the pain was.

Dr. J. H. Carstens presented the following specimens: (1) Ovaries and tubes removed during the meeting of the American medical association by Dr. James Price, of Philadelphia—recovery; (2) A case of so-called pelvic cellulitis. This case clearly demonstrates soundness of the opinion held and expressed by Dr. James Price, of Philadelphia, that all these cases of so-called pelvic cellulitis, pelvic peritonitis and pelvic exudate are in reality diseases of the ovaries and tubes; (3) Ovaries and tubes removed during the meeting of the American medical association by Dr. Ross, of Toronto, Ontario. This was also a so-called case of pelvic cellulitis; (4) Inflamed and degenerated ovaries and tubes removed from a patient who had been separated from her husband for five years on account of great pain during sexual intercourse—recovery; (5) This case was seen in consultation with Drs. Donovan and Shurly. The most prominent symptom with this patient was a long continued, persistent and very distressing cough, continuing night and day for many months unabated by any medication. Temperature elevated from ½° to 1⅓°. Pelvic trouble was diagnosed and these diseased uterine appendages were removed. The patient made a perfect recovery and the cough has all left her; (6) Large pus sac. The tubes and ovaries on both sides were diseased. They were both removed and a perfect recovery followed. This was also a case of so-called pelvic cellulitis; (7) Vaginal hysterectomy. This patient gave a history of flooding for six months. Cancer was diagnosed and the uterus removed. Great hæmorrhage occurred during the operation. The uterus after removal was found greatly enlarged and she was found to be pregnant two months—recovery.

Dr. H. W. Longyear reported and exhibited the following cases and specimens: (1) Dermoid cyst removed from Douglas's cul-de-sac, also cystic ovaries —recovery. This patient had been treated for retroversion before she came to me; (2) Dermoid cyst removed from Douglas's cul-de-sac—recovery. This case had also been treated for retroversion before she came to me; (3) Pus tubes and cystic ovaries—recovery; (4) Cystic left ovary—recovery; (5) Sclerotic ovaries and chronic interstitial salpingitis. Was a sufferer for a great number of years and had received a great variety of treatments. She was a chronic masturbator—recovery.

DR. MCGRAW reported the following case and presented the specimen: (1) A specimen showing an intussusception of the bowel removed from a patient at Saint Mary's hospital with the following history: The child awoke Monday morning in great pain which continued during Monday, Tuesday and Wednesday. He had no fecal vomiting, no rise of temperature, no great tenderness on pressure over the bowels. He had passed a little blood by the bowel. Laparotomy was performed and there was immediately an escape of gas. A small tear was found in the small intestine and near it a dark gangrenous line. There had been a volvulvus in addition to the intussusception. I sewed up the little tear. Four inches above the ileo-cæcal valve I found this intussusception. I attempted to reduce it but found the bowel too gangrenous. I do not think it advisable to attempt the reduction of an intussusception after the fourth day. The affected part of bowel was resected. It may have been better in this case to have made an artificial anus. The child died in five or six hours after the operation. This case had no fecal vomiting and shows the great difficulty in diagnosing these cases. This case stands in strong contrast to one I reported to this society some months ago, in which fecal vomiting was present in a case of intestinal obstruction due to large quantities of pop corn in the bowel and which suddenly relieved itself by very copious evacuations, not requiring surgical interference. Nevertheless, I believe it to be the safer plan to operate early in such cases.

DISCUSSION OF PAPERS.

DR. G. V. VOORHEES read a paper entitled "Three Surgeons" (see page 385), which was discussed by DRS. DONALD MACLEAN, T. A. MCGRAW, E. L. SHURLY, E. W. JENKS, and JOHN FLINTERMANN.

A vote of thanks was passed by the association to DR. VOORHEES, for his able paper, and also for three photographs presented by him to the association. They were of AMBROSE PARÈ, MARTIN, of Boston, and BEECH, of Coldwater, Michigan.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, JUNE 27, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR J. N. MARTIN, of Ann Arbor, presented a uterus from the inner surface of which there was an enormous development of fatty tissue. So great were the fatty deposits that when the uterus was incised it immediately inverted itself. The history of the case was as follows: The patient is thirty-two years old, the mother of four children, and has been married ten years. She had never, excepting when pregnant or during the period of lactation, missed a menstrual period. She has had metrorrhagia and menorrhagia but previous to the birth of her first child she had been a perfectly healthy woman. After her first child was born she began to have pain and irritation to the left side and six years ago a tumor made its appearance, springing apparently from the left pelvic cavity. When she consulted me on April 29, last, she was very pale, weak, and anæmic, and had been so for a long time. Upon examination she was found to be suffering from what seemed to be an ovarian tumor. The ovarian dullness extended up

nearly as high as the ensiform cartilage. She was first put upon a tonic and supporting treatment, and on May 10 an ovarian tumor of large size was removed together with the left ovary and tube. After the removal of the ovarian tumor the uterus, whose internal measurement had previously been found to measure six inches, was found to be greatly enlarged. The uterine development was symmetrical. Inasmuch as this enlarged uterus had received all manner of treatment without avail it was determined to remove the uterus entirely and it was found to be in the condition in which I show it to you to-night. The specimen was given to DR. GIBBES for microscopical examination and he reported the growth of an entirely fatty nature in all its parts. I have never read, heard, nor seen a specimen of this kind, and I would like to have an expression of opinion from the members here present. The patient made a perfect and rapid recovery.

DISCUSSION OF PAPERS.

DR. J. A. WESSINGER, of Ann Arbor, Michigan, read a paper entitled "Intra-Uterine Amputation." (See page 393).

DR. LONGYEAR: The term amputation in utero is not a good one, because the cases are not usually amputations at all but a lack of development. In some instances you can see the rudimentary fingers and toes at the ends of the stumps, in which cases the trouble is clearly one of lack of development and not amputation.

DR. CHAS. DOUGLAS: Was there a syphilitic history? Did the people live in the country or in the city?

DR. WESSINGER: There is no specific history. The people live in Ann Arbor.

DR. DOUGLAS: Was there a history of the loss of children among other branches of the family?

DR. WESSINGER: No.

DR. W. P. MANTON: Being a teacher of embryology I have listened with interest to DR. WESSINGER'S paper, and in view of the extreme rarity of intra-uterine amputation it is a valuable contribution. I have never seen a case which I could positively say was an intrauterine amputation. Formerly, the accepted theory was that the cord did the work, but of late years it has been proven that it must be some other agency at work as the cord by itself would be incapable of performing an amputation. The best articles written on this subject are by German authors. In a case reported it was in the fifth pregnancy. In the second month the mother met with a fall but she went nearly to full term, but several extremities were found amputated. DR. LONGYEAR is not correct when he says there is no such thing as intrauterine amputation, because, as DR. WESSINGER, in his paper affirms, the amputated extremities have been found in the uterine cavity. When, from any cause, the amniotic membrane is ruptured it folds in upon itself and forms fibrous strings or shreds which becoming attached to the fœtal extremities accomplish the amputation. All observers now concede that the amputations take place through processes or growths from the amniotic membrane becoming attached to the extremities of the embryo. An arrest of development is not an amputation. An arrest of development would be manifest by rudimentary parts being detected at the extremities. Microscopic examination would show cicatrices in the case of amputation which

would not be the case if the deformity were due to an arrest of development. Granulation tissue might also be found. I have in my possession specimens which show very beautifully the non-development of some of the extremities. The subjects embraced and suggested by DR. WESSINGER'S paper have not received the amount of attention as yet from investigators which their importance demands. DR. WESSINGER'S paper is a valuable contribution to the literature of the subject.

DR. WESSINGER: I would say that upon close investigation I could find no trace whatever of syphilis. The father and mother are both perfectly healthy people. Very little history relative to the grandparents could be obtained. The first child born is still strong and healthy, all the others being born dead.

PATHOLOGICAL SPECIMENS.

DR. H. W. LONGYEAR exhibited the following pathological specimens: (1) Cyst of the ovary with pus tubes having the following history: The patient was confined fifteen months ago and has been sick ever since. She had a puerperal infection of the tubes. The baby had ophthalmia neonatorum. The patient had also had trouble in making her water and other signs of gonorrhœal infection. In my opinion the great majority of pus tubes come from and have their origin in gonorrhœa, and that certainly was at the bottom of the trouble in this case.

DR. MANTON: While I admit that gonorrhœa is responsible for some of the pus tubes and puerperal infection which we have, I do *not* believe that all pus tubes have their origin from gonorrhœal infection. The great majority of men have at some time in their lives had gonorrhœa and if that were always followed by pus tubes in the female we would certainly have even more pus tubes than now exist.

DR. DOUGLAS: The statement DR MANTON makes relative to all men having had gonorrhœa is a sweeping one and I would call its accuracy into question.

DR. LONGYEAR: Have you ever seen a pus tube in a virgin that was not tubercular?

DR. MANTON: No. We are talking of puerperal infection.

DR. ALONZO BRYAN: Has the pus formed in these cases always been found to contain the gonococcus?

DR. LONGYEAR: I have not always examined for the gonococcus, and at any rate I do not believe that it is always necessary to find it to establish a positive diagnosis of gonorrhœal infection. I have known pus tubes to open into the uterine cavity and discharge per vaginam and this discharge is capable of producing gonorrhœa in the male.

DR. W. B. SPRAGUE: I have at the present time two cases in hand now which substantiate the assertion of DR. LONGYEAR relative to the discharge from pus tube infecting the male with gonorrhœa.

DR DOUGLAS: I have seen many cases of this kind but have always doubted the stories they tell. They might be mistaken in the purity of the source from which their infection was obtained. In medicine there are many doubtful things and this is one of them. I have seen such cases of innocent infection alleged in which absolutely no pus tubes could be demonstrated.

DR. G. W. STONER: I have seen many cases of purulent discharge not gon-

orrhœal. It is possible to have a non-specific vaginitis. It is not beneath the dignity of any man to practice any branch of the healing art and any man who is too good to treat gonorrhœa should not be a gynecologist and treat those diseases which sometimes have their origin in gonorrhœa.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

THE TEACHING OF MEDICAL BIOGRAPHY.

IN the ordinary American curriculum there has always been a tendency to slight the literary aspects of the medical career. In the intensely practical spirit which pervades all our teaching not only has everything in the nature of medical *belles-lettres* been tabooed, but seldom has commemoration been made of those master-spirits who,—

"While their companions slept,
Were toiling upward in the night."

Why is not medical biography taught in our schools? Why has the American graduate to go forth into practice knowing little about Hippocrates and less about Rush? He may, probably, know that Hippocrates composed an oath, to the ethical requirements of which in its modern garbled-form, the newly-fledged graduate assented on the day he received his diploma. Of Rush he may never have heard, unless he may have encountered one of his monument committee. He will have heard of a Sims' speculum and inferred that an individual of that name existed in historic or prehistoric times. The name of McDowell was probably never whispered to him by those who now teach him that the pus tube is the alpha and omega of pelvic pathology. In fact, if the lives of great men remind the student of anything at all, it must be the unnoticeable impress made by their footprints upon the sands of time.

It may be that while the world is becoming more and more, the individual can do nothing else but wither. Yet biography could surely be taught in a way that might make it distinctly serviceable to the medical student. In pedagogic days it was the custom to teach all history by the biographical method. The happenings of each period were grouped in serial order under the caption of some monarch or magistrate. The inevitable result of this was that the personality of the ruler came to be inextricably connected in the mind of the student with the events of the time; so that Henry VIII and the Reformation came to be tacitly linked together in a cause and effect relation. This undoubtedly illustrates the faults of a biographical method. However, to understand any idea it is necessary to know something of its ancestry. Practical antisepsis can be taught perfunctorily and students drilled in the essential ritual of sterilization, but does the student really comprehend what antisepsis is until he reads of the classic experiments of Lister in fermentation and putrefaction? How many lives has the drainage-tube saved, yet how few remember Chassaignac in connection with it. The historical method is after all the rational way of teaching anything, for by this method alone is the evolution of the idea outlined. To teach medicine by the historical method would at least insure the teaching of a certain amount of biography.

Occasionally in a paroxysm of veneration the American people seem to think they ought to commemorate some one. A great man is dead, and is apparently in such imminent danger of being forgotten that a monument must perpetuate his name and fame. A stirring appeal is made, perhaps it is annually repeated as in the case of poor Benjamin Rush, but the seed thus sown falls on barren ground. Why is this? Simply that the teaching of medical biography has been generally neglected. The appeals are made with earnestness and eloquence, but they awaken no responsive emotion. The only sense such orations appeal to, or stimulate, is the historical sense, and this is unfortunately found wanting.

EDITORIAL BREVITIES.

THE BACILLUS AS A REMEDY FOR AGRICULTURAL PESTS.

PASTEUR'S suggestion that the rabbit-pest in Australia should be controlled, by the inoculation of some pathogenic microbe, received experimental support in Thessaly a short time ago. A plague of field mice called for some remedy. The bacillus typhi murium had been proved to be fatal to mice, while harmless to man and other animals. Pure cultures of the bacilli were made. Bread was saturated with the culture fluid, and this distributed in the plague-stricken localities. As a further precaution several mice were directly inoculated and let loose. The result was successful. In nine days the plague had greatly abated in severity and in four weeks the mice had all gone. This new weapon, science is acquiring the use of, this power of causing an epidemic among helpless animals, is one that is open to many objections of a sentimental nature. At this time of the year, however, we have no particular sentimental regard for the mosquito or the black-fly, or even that every-day nuisance, the common house-fly, and if the bacteriologist can furnish us with a tolerably mortal epidemic, we are inclined to bid them go-ahead.

THE INFLUENCE OF THE BICYCLE ON ORGANIC FUNCTIONS.

A FRENCH physician, Dr. Tissié, of Bordeaux, has been investigating the effect of the bicycle on the principal functions of the body. He is a bicyclist himself, and has made a number of observations regarding this pastime. He finds the 'cycle an excellent exercise to the respiratory functions, provided the pace do not exceed ten or eleven miles an hour. Respiration should be nasal as far as possible. He finds it an excellent agent in hæmatosis, providing a sort of ærial gavage. He interdicts its use, however, until the age of twelve or thirteen. The 'cycle increases the activity of the circulation, and should be forbidden to cardiac patients who have exceeded the period of compensation. The anæmic murmurs disappear under its use. Women should not try to run at a higher speed than six or seven miles an hour. It is of great use in gout, rheumatism, and obesity. Dr. Tissié has encountered several cases of temporary paralysis. This usually lasts eight or nine days, and is caused by pressure of the hypothenar eminences on the guiding handles and by the motions of the machine. Twelve cases of metatarsal rheumatism were presented to the Academie de Medecin, as a result of bicycling. These Dr. Tissié believes to be infrequent, and he recommends the bicycle for general use to the French people.

MEDICAL NEWS.

DIVORCIN is a new remedy for hysteria.

MINNEAPOLIS is to have a new hospital.

CHOLERA is coming. Shall we escape? is the question.

DR. WILLIAM T. LUSK's wife recently died in Rome, Italy.

EMIGRANTS stricken with cholera have arrived in New York.

THE university of Dublin recently celebrated its tercentenary.

DR. M. E. DIEDERICHS, of Detroit, recently died of typhoid fever.

THE Rush monument fund now amounts to over two thousand dollars.

DR. DACOSTA has severed his connection with Jefferson Medical College.

SIXTY CENTS (three francs) is the compensation for a post-mortem in France.

THE Grady hospital at Atlanta, Georgia, was opened about three weeks since.

MEASLES are epidemic in Japan. The Emperor himself has been attacked.

DR. PRAVAZ, of Lyons, France, inventor of the hypodermic syringe, is dead.

SUCCI, the celebrated faster, has become insane. He imagines he is Julius Cæsar.

AN international medical congress will be held during the Chicago exposition next year.

TYPHUS FEVER has been introduced extensively into New York by recently landed emigrants.

FOUR AT A BIRTH.—A Philadelphia woman visiting at a friend's house gave birth to four girls.

THE insane asylum at Middletown, New York, has passed out of the hands of the homœopaths.

A POCKET plaster-knife, for cutting plaster corsets, has been invented by Dr. John Riblon, of Chicago.

THE fourth international congress for the study of the abuse of alcohol will convene at Hague, September 8.

A COCAINE injection is reported to have been the cause of a recent death at Bellevue hospital, New York city.

A LEAGUE against cancer has been organized in France. It will pursue investigation in regard to cancer.

BECAUSE of advancing years, Professor Verneuil has severed his connection with the Paris faculty of medicine.

THE Cincinnati hospital has been compelled to close its veneral and ophthalmic wards because of lack of funds.

SIR DANIEL WILSON, president of the Toronto university, is dead. He was born in Edinburgh, January 5, 1810.

STAMMERING is a disqualification in candidates for admission to the Saint Petersburg military medical academy.

IT is estimated that over four hundred physicians have visited Hot Springs, Arkansas, during the past six months.

DR. SCHULTE has been appointed a member of the Detroit board of health in place of Dr. P. Klein who has resigned.

THE first meeting of the Italian society of laryngology, otology, and rhinology, will be held in Rome, October, 1892.

THE twenty-third annual meeting of the medical society of Virginia will convene at Alleghany Springs, September 13.

THE Library of the American medical association is to be removed to Chicago and placed in charge of the Newberry library.

DR. DUNCAN MCLEOD has been appointed a member of the Detroit board of Health in place of Dr. E. A. Chapoton who has resigned.

GOVERNOR FIFER has appointed a homœopath surgeon-general of Illinois to fill the vacancy created by the death of General Matthews.

AT the recent meeting of the British medical association at Nottingham, it was decided to admit women physicians to full membership.

DR. L. MCLAIN TIFFANY, of Baltimore, has received the appointment of surgeon-in-chief of the Baltimore and Ohio railway system.

THE annual session of the Southern surgical and gynecological association will be held in Louisville, Kentucky, November 8, 9, and 10.

THE meeting of the American electro-therapeutic association will be held at the academy of medicine, New York city, October 4, 5, and 6.

THE American dermatological association will hold its sixteenth annual meeting at New London, Connecticut, September 13, 14, and 15.

THE New Jersey pharmaceutical association has petitioned congress to adopt the metric system of weights and measures in the customs service.

THE medical society of the Missouri valley will hold its annual meeting at Council Bluffs, Iowa, September 15, and continue in session one day.

THE sixth annual meeting of the American orthopedic association will be held at the New York academy of medicine, September 20, 21, and 22.

THE United States manufacturing chemists' association has entered a protest against the bill to prevent the adulteration and misbranding of foods and drugs.

THE plumbing in the capitol at Washington is spoken of as a "sanitary curiosity." It is from forty to ninety years old, and needs reconstruction very much.

WASHINGTON has adopted a system of carrying off garbage in patent air-tight steel carts, and treating it with exhaust steam to pass the offensive gasses into the sewers.

THE Cartwright prize of the alumni association of the college of physicians and surgeons of New York, amounting to five hundred dollars, will be awarded in June, 1893, for the best essay upon any subject connected with the science of medicine. An essay must contain the results of original investigation, and must be the work of a single author. Essays in competition must be sent to the Secretary, Dr. T. M. Cheeseman, 46 East twenty-ninth street, New York, on or before April 1, 1893.

THE New York physicians' mutual aid association now has a membership of one thousand one hundred and six, and pays one thousand dollars at the death of each member.

THE first Mexican medical congress will be held in the City of Mexico, December 6, 7, 9, and 10, 1892. Dr. Carman Y. Valle is president, and Dr. Luis E. Kuiz, general secretary.

A WOMAN in London has been arrested for drunkenness one hundred and fifty-one times during the past eight years. The judge has concluded that this remedy is not a specific for inebriety.

SALT IN DISEASES OF THE URIC ACID DIATHESIS.—Sir Wm. Roberts in his Croonian lectures on gout and gravel warns the subject of these disorders against the excessive use of table salt.

DR. LEWIS A. SAYRE, of New York, has been obliged to resort to legal means to prevent a pharmacist from advertising and selling a preparation which had been termed "Dr. Sayre's remedy for dyspepsia."

THE Saint Louis medical society has one female member, and since she does not feel sufficiently interested to participate in the discussions, the society refuses to admit any more women to membership.

DR. THOMAS TAYLOR, government microscopist at Washington, has been awarded a silver medal by the International exposition at Paris for a collection of photographs and drawings of the microscopic analyses of food adulterations.

PROFESSOR AGNEW left an estate estimated at one hundred thousand dollars. The hospital of the university of Pennsylvania has been remembered in a legacy of fifty thousand dollars, and the college of physicians will receive one thousand dollars.

THE association of hospital physicians and surgeons of Philadelphia is the name of an organization established for the purpose of affording physicians visiting that city an opportunity to avail themselves of the clinical facilities of the various hospitals. Dr. H. R. Wharton, 112 South Eighteenth street, Philadelphia, will supply a roster on application.

THE American pediatric association has elected the following officers for the ensuing year: President, Dr. Blockader, of Montreal; first vice-president, Dr. Keating, of Colorado Springs; second vice-president, Dr. Earle, of Chicago; secretary, Dr. Samuel Adams, of Washington city; treasurer, Dr. Townsend, of Boston; recorder, Dr. Watson, of New Jersey.

THE Austrian minister of the interior has issued a decree commanding the municipal magistrates of all the communes to direct their attention to prescriptions written by physicians within their jurisdiction. The duty of the magistrates is to enforce legibility in handwriting to the end that errors respecting the nature, quantity, and dose of medicaments may be avoided.

THE Pontiac medical society has been organized. The society will fulfill the usual purposes of a medical society. It has commenced its career under favorable conditions and with strong men at the helm. The following are the officers: Vice-president, Dr. C. B. Burr; treasurer, E. A. Christian; secretary, W. McCarroll. The president of each meeting is appointed by the outgoing president.

THE women of New York, Pittsburg, and other cities have inaugurated a crusade against the spitting nuisance. Objection is made to spitting in the public highways on the ground that the sputum is an established factor in the spread of disease.

THE Boston board of education has appointed a corps of experienced physicians to examine the physical condition of all graduates of the Normal college who make application for the position of teacher in the public schools. Three dollars is the fee fixed for each examination.

ON the ground that they are unscientific and misleading, the Wisconsin state board of health has refused to recommend the adoption of certain works on temperance which the woman's christian temperance union endorse for use as text-books in the public schools of that state.

SOMETHING NEW IN SUICIDES.—A French girl bought fifty leeches, took off all her clothing, applied the leeches to the thighs and forepart of the trunk and to the breasts. As the leeches fell off gorged she allowed the bleeding to go on. She was found on the floor exsanguinated and dying.

THE government has ruled that Keeley is a retail liquor dealer, and liable to the tax on spirits. Keeley protests against being classed as a saloon keeper, but since he furnishes whiskey to his patients by the drachm and bottle, the revenue department insist upon him paying the special tax.

SIXTY-TWO THOUSAND pounds of opium passed through the custom-house into this country during the year 1891, and over one hundred thousand pounds were smuggled in without paying duty. Less than one-third of this amount was known to be used legitimately in medicine and the arts.

DIPLOMAS of the following colleges are not recognized by the Illinois state board of health: German-American homœopathic college, the German college of medicine and obstetrics, and the German medical college, all of Chicago; also the Toledo medical college, dating from the session of 1891.

THE Canadian medical association will hold its twenty-fifth annual meeting at Ottawa, September 21, 22, and 23, under the presidency of Dr. John L. Bray. The address in surgery will be delivered by Dr. Donald Maclean, of Detroit. Subject: "Observations on the progress of surgery in our own day."

THE Cincinnati hospital library, which contains seven thousand three hundred and sixty-three bound volumes, has been formally inaugurated. The bound periodical volumes comprise four thousand two hundred and twenty-five of this number. One hundred and fifty-one current journals are received regularly.

IN Germany vendors of drugs as cures for different diseases are being summarily and severely punished by the courts. In the Rhine province the vendor of a cure (a solution of tartar emetic) for the liquor habit, and a nervinum and Saint Jacob's drops for dropsy, has been sentenced to the penitentiary for two and one-half years. In Freiburg another received two years for selling an arcanum for mouth and clove diseases, while still another was imprisoned two years for vending "*wunder balm*." In Thybingen a vendor was sentenced to eighteen months. No laws exist in Germany to prevent this kind of traffic, but the judges have taken the law in their own hands and propose to prohibit the vending of so-called specifics for certain diseases.

SETON HOSPITAL will be the name of an institution soon to be erected in New York city for the treatment of consumptives. It is to cost about three hundred thousand dollars, and will be in charge of the Catholic order of the sisters of charity.

AT the recent meeting of the American institute of homœopathy held in Washington, District of Columbia, resolutions were adopted denouncing the patent medicine men, and providing for their expulsion from the society; branding the chloride of gold cure as a humbug; and endorsing the Paddock pure food bill, and recommending its passage by congress.

THE *British Medical Journal* reports Mr. Goschen as making, in his budget speech, an interesting comparison relative to the consumption of alcoholic spirits, tea, and coffee at the present time and that of fifty years ago. In 1841 thirty ounces of alcohol were absorbed per head of the population; coffee, seventeen and one-half ounces; tea, eighteen and one-half ounces. In 1891 fifty-six ounces of alcohol *per capita* were consumed, while the consumption of tea and coffee had risen to nearly one hundred ounces. In fifty years the use of coffee has decreased five ounces per head, and tea has increased about eighty ounces. In this connection it may be of interest to know that in the United States in 1840 the amount of beer and spirits consumed *per capita* was four gallons, while in 1891 it was sixteen gallons.

THE recently amended medical bill for the Province of Quebec, Canada, has been defeated in the legislative council. The bill was framed on mediæval lines and deserved the fate which befell it. One of its chief requirements was an increase in the number of didactic lectures. Concerning this feature of the bill the *Montreal Medical Journal* has this to say: "Only in this Province of Quebec, which is keeping up its reputation for being at the tail-end of the procession in many matters, is it thought advisable to increase the number of lectures in order to improve medical education. Both abroad and elsewhere on this continent all advance is being made by lessening the number of lectures and increasing the practical work. In mediæval times, when the text-books were scarce or non-existent, all teaching was by lectures, from which elaborate notes were taken by the student; but these days are past, and yet the majority of the college of physicians do not seem to have found it out."

HEREDITARY TRANSMISSION OF MUTILATIONS.—Dr. C. G. Lockwood, of New York, says the *Medical Record*, has recently published some interesting results of his experiments on the hereditary transmission of mutilations. White mice were selected on account of their rapid breeding, as they begin to breed when they are thirty days old and breed every thirty days. He bred them in-and-in for ninety-six generations, destroying all the sickly and defective ones, and in this way obtained a larger and finer animal than the original pair. His experiments in breeding their tails off were done by selecting a pair and putting them in a cage by themselves and clipping the tails of all of the young. When these were old enough to breed he selected a pair, and when they had young, clipped their tails. By continuing this breeding, in the seventh generation he got some young without tails, and finally got a perfect breed of tailless mice. By taking one with a tail and one without a tail, and alternating the sexes in each generation, he finally again got a breed of all-tail mice.

RECENT PUBLICATIONS.

REVIEWS.

MATERIALISM AND MODERN PHYSIOLOGY OF THE NERVOUS SYSTEM.*

THE thesis maintained in this little book is a very old one, but it is treated in a fresh and attractive manner. What deductions can be made, in regard to the nature of consciousness, by a review of our present knowledge of the physiology of the nervous system? This is the question the author attempts to elucidate. An examination of the views of the leading biologists indicates that they are unable to pronounce mind to be the product of matter and energy, and that neither of these can be compounded into consciousness. Mind, matter, and energy are therefore three distinct entities. Consciousness as the equivalent of mind must be conceived of as possessing extrinsic existence. What becomes of this great reality when the material being has "lapsed into the infinite azure of the past?" What becomes of this spirit every time the material man sleeps? It leaves him. A sleeping man is a dead man. Where does the consciousness—the spirit go to at this time? "It withdraws," our author says, "to where it comes back from."

Transcendentalism finds as fine a scope for its intuitions and inductions in physiology as elsewhere, and the author of this little work makes the most of his subject. The essay is exceedingly interesting, well written, and its perusal will afford enjoyment and suggest new ideas to all its readers.

*By Walter H. Thompson, M. D., LL. D., professor of materia medica and diseases of the nervous system in the university of New York. G. P. Putnam's Sons, New York.

THE USES OF WATER IN MODERN MEDICINE.*

MENTION has already been made of Dr. Baruch's excellent manual of hydrotherapy, in noticing the first volume. In the present volume the therapeutics of various disorders by means of water is considered. An excellent review of the Brand method of treating typhoid will be found especially acceptable at the present time. All that was said of Dr. Baruch's first volume can be repeated of the second.

*By Simon Baruch, M. D. Volume II. Physicians' leisure library. Cloth, 50 cents; paper, 25 cents. G. S. Davis, Detroit.

CARDIAC OUTLINES.*

IN cardiac outlines we have an attempt, and a very successful one, to teach a physical diagnosis as far as possible by the graphic method.

The outlines are divided into the following groups. A descriptive or anatomical series gives a sketch of the thorax of the liver, of the heart, and of the pericardium. A "constructive" series illustrates the way in which a diagram of the heart can be correctly traced on the chest of the living or dead subject. A

few pages are devoted to the methods of physical examination and to inspection and palpation in health and disease. Percussion of the heart under normal and under pathological conditions is dealt with in the next series. The section devoted to cardiac auscultation is preceded by remarks on the normal and pathological heart-sound and cardiac murmurs by means of the graphic method. Lastly examples are given showing the manner of using the diagrams and symbols for clinical record.

The scheme of the work is admirable, and will be of great assistance to students and practitioners who take careful records of their cases.

*By William Ewart, M. D., Cantab., physician to Saint George hospital. Sixty-two illustrations. G. P. Putnam's Sons, New York.

REFERENCES.

BOOKS AND PAMPHLETS.

"Some Effects of Blennorrhœa in Women." By James T. Jelks, M. D., Hot Springs, Arkansas. Reprinted from *American Gynecological Journal.*

"The treatment of Suppuration of the Knee-Joints with Illustrative Cases." By W. T. Dodge, M. D., Big Rapids. Reprinted from the *Medical News.*

"Hepatic Abscess: Report of a Case with Remarks upon the Amœba Cell." By W. A. Edwards, M. D., and James Sears Waterman, M. D. San Diego, California. Reprinted from *Pacific Medical Journal.*

Messrs. Blakiston, Son & Company announce a new "Materia Medica, Pharmacy, Pharmacology, and Therapeutics." By Wm. Hale White, M. D., F. R. C. P., etc., physician to, and lecturer on materia medica at, Guy's hospital. The American copyright edition is edited by Reynold W. Wilcox, M. A., M. D., professor of clinical medicine at the New York post-graduate medical school and hospital; assistant visiting physician Bellevue hospital, etc. To be printed in one compact, handy volume.

MEDICAL PROGRESS.

MEDICINE.

THE TREATMENT OF SURGICAL TUBERCULOSIS BY INJECTIONS OF ZINC CHLORIDE.

LANNELONGUE (*Revue de Chirurgie*, 12 année, Number V, 1892) states that his sclerogenetic method is efficacious in surgical tuberculosis, from the fact that it surrounds a tubercular area with a large mass of embryonic tissue, which quickly forms a fibrous envelope. The transformation which this tissue undergoes obliterates a great number of blood-vessels. It is, moreover, entirely devoid of lymphatics, hence it forms a structure which strongly resists tubercular infection. As an immediate consequence, tubercular neoplasm is converted into fibrous tissue, from the fact that it is invaded by the newly-formed inflammatory exudate.

In cases of non-suppurating arthritis, when the synovial membrane of the joint is involved, the transformation is prompt and the cure is rapid. In case there are lesions of the bone, if these are small they may undergo spontaneous cure; or they may become the seat of retrograde sclerosis; or they may persist, causing acute symptoms after injection of the soft parts.

In suppurating, tubercular arthritis, complicated, as is usually the case, with involvement of the bone, the treatment fulfills a double end. In the first place, it is curative, from the fact that it transforms the walls of the abscess into fibrous tissue; and, in the second place, it prepares the tissues for a complementary operation, rendering the danger of infection from surgical intervention very much less. This operation, after thorough treatment by the injection method, consists in carefully removing the bone lesions.

In simple cases of tubercular arthritis, a cure should be accomplished by the injection method in a few months. When lesions of the bone are also present these usually require complementary operation. When the joints are suppurating and discharging, the injection treatment should be continued steadily, supplemented, of course, by direct surgical intervention, until finally cure is accomplished.

Coudret has employed this method in about sixty cases of surgical tuberculosis. The results were in general extremely satisfactory, many cases recovering entirely from the injections alone, others requiring comparatively slight operations before complete cure was accomplished.

Coudret believes that either the bacilli disappear rapidly or their vitality is suspended. This opinion he bases upon three examinations of the extirpated tissues and upon negative inoculations.

Dubois has successfully treated two cases. The first, a man aged fifty years, suffered from osteomyelitis of the right knee, together with osteitis of the tibia. In addition to fungous involvement of the synovial membranes, the tendinous sheaths of the perineal muscles were also invaded. Cocaine was first injected; then twenty-two drop injections of the chloride of zinc solution were made. A cotton silicate dressing was applied. The patient suffered from much pain, which was relieved by morphine and chloral. In three weeks the swelling had entirely disappeared, and there remained only pain about the seat of disease in the tibia. Ten new injections were made at this point. A month later the patient was entirely cured, with preservation of movements. Both the other patients suffered from tubercular arthritis of the knee-joint, and in both cure was complete.

Iscovesco also successfully treated several cases. Three of these suffered from coxalgia; they were practically cured at the time of reporting.—*Therapeutic Gazette.*

VIRCHOW ON THE PREVENTION OF SEXUAL DISEASES.

At a meeting of the medical society of Berlin, held in May, the subject for discussion was the repression of syphilis. Professor Virchow entered into the debate with all his usual spirit and decision. He advised, first, that his hearers acquire a clear idea of what precise thing it was that society needed. The cry generally was for more stringent regulations against prostitution. This, to his mind, was too narrow for medical men to discuss; they must consider the cur-

tailment of syphilis, and they must take care to keep within the bounds of actuality. The view of some authors that syphilis was as old as the human race was, in his opinion, pure fancy. He had examined all the writings and alleged proofs regarding the early origin of venereal disease. It was not sufficient, he thought, that expressions could be found in this or that ancient poet, or this or that pornographist ancient or modern, showing that the writer was cognizant of a diseased condition of the genital organs, and then straightway assume that syphilis was the disease mentioned. Simply to conclude that every antique case of sexual trouble was a venereal one was going too far. He had sought with great zeal to solve the problem of how far the existence of syphilis in the centuries long ago could be proved by the absolute relics that remained to us. But not a bone had he seen from prehistoric quarries which enabled any one to date back that disease beyond the time of its comparatively recent advent into southern Europe. Of the period before the voyages of Columbus not a single bone had been produced that substantiated the theory of the very early origin of that malady. In recent times search had been repeatedly made in Peru, for example, in order to discover syphilis in the grave-bones of the older races. Careful examination had shown a form of hyperostosis, but nothing more. This had been met with, however, in the cave bear and some other inferior animals also, and was a manifestation of "cave gout." The old troglodyte also showed the same changes in the bones, which did not go beyond those of the disease that we now call arthritis deformans. This had no tangible connection with syphilis, and was, in his opinion, an independent disease. It was remarkable, said Virchow, as quoted in the *Medical Press and Circular*, that from the moment when the European peoples began to undertake sea-voyages, when the Spaniards and Portuguese especially began their voyages of discovery in the South Sea and the Indian Ocean, syphilitic bones were found in the graves in the Indies and New Caledonia, but he had never been able to discover a single such object originating in the times before the great sea-voyages, neither with our predecessors, nor with the ancient Egyptians and savage nations. So that the existence of syphilis earlier than the sixteenth century must remain in dispute. Humanity and syphilis were not inseparable. Preventive medicine did not need to cope with any argument, however poor it might be, that it was useless to attempt to hinder the transmission of venereal diseases because they were coeval with man.

Virchow held that formation of new laws of a practical character might be undertaken, limited at first to the betterment of Berlin. He had already endeavored, in the discussions of the Reichtag, to show that the insurance laws, for example, should be aimed not to make men moral but to make them healthy. The existing German insurance acts provided that insurers who "intentionally brought their illness upon themselves" by sexual excesses could not claim full sick-pay. The person concerned did not infect himself because it was his intention of doing so; his intention was simply to have sexual intercourse, and, if he contracted syphilis in so doing, that was not shown to be a part of his intention. A single sexual act could not be described as sexual excess. If any man had an infected wife and had the misfortune to contract the disease from her, it could not be made to depend upon excess. Medicine must, therefore, treat men as men, disregarding their various moral, social, and political qualities. The greatest of criminals, when ill, could always obtain conscientious

medical assistance. Governments had need of a greater degree of liberality in providing for the sick of this class. Society would be benefited when this was done, for one of the best means of reducing the dangers of the spread of these diseases would be by offering to the victims every inducement to have early recourse to treatment. But the reception of syphilitic cases was expressly prohibited in some hospitals—that of Urbau, for example. Other hospitals had so little room to spare for these cases that they could take a part only of the patients that presented themselves. There had been a desire in Berlin to associate polikliniks with the existing institution and to treat syphilis by means of those. There was also some intention of enlarging the Moabit hospital, so that a poliklinik might be conducted for the relief of venereal patients. But this proposal had been negatived in the supposed interests of the junior members of the medical profession, although all such matters could be settled by compromises. The first position for medicine to take in these questions was to declare in favor of bringing the sick under treatment as early as possible, and that as far as possible they should be treated within the walls of hospitals or in wards set apart for these specific ends. Moral and financial considerations were, to the medical eye at least, distant and secondary in importance.—*New York Medical Journal.*

THE PROPER COURSE TO PURSUE WHEN A WOMAN WITH SYPHILIS COMES TO CONSULT YOU.

Professor Fournier has just given in one of his remarkable lessons the line of action to follow when consulted by a syphilitic woman. This varies with the social status of the patient. If *irrégulière*, that is to say, a woman who is kept or a prostitute, she must be told at once the nature of her ailment so as to put her on her guard against the danger of infecting others if she persists in maintaining relations with them. If on the contrary it is a married woman the line of conduct is much more delicate. To declare rudely that she is affected with syphilis is to risk, if the husband is the culpable one, causing domestic trouble, and separation in the family. If one simply gives a prescription without saying anything, this usually amounts to nothing for she does not fail to instruct herself upon the real nature of the drugs employed and thus learns the truth. Theoretically it is better to place the burden on the husband of keeping from the wife so far as is possible the nature of the disease which she has received from him. The husband must thus be taken into the case and entrusted with the direction of the care to be taken and the carrying out of the treatment. For this reason Professor Fournier does not advise giving the patient at the first visit a prescription which could awaken suspicion. A local treatment without mercury should suffice, the patient must be told that there are certain points in the case which do not appear quite clear, and for which reason a conversation with the husband will be necessary, or that there are certain things you wish to recommend to the husband, and ask to have him sent to see you. If the woman is innocent, that is to say, if she has had relations with her husband alone, she will readily comply with your request. From this time on you have only to come to an understanding with the husband, keeping as much as possible from the knowledge of the wife the real nature of her complaint. However, too much secrecy cannot be expected, for after a certain period of this prolonged and

mysterious medication the woman begins to suspect the truth, but the object has already been attained, scenes of violence have been avoided which in the commencement would have been precipitated by a sudden discovery of the true nature of the disease and usually regrettable separations and divorces are avoided. But to act as we have suggested we must be quite sure of our premises. We must be assured that it is from the husband alone and not from some other that the contagion has come for in the opposite case it would be the same as saying to the husband, "your wife has syphilis and as you have not it, she must have contracted it from some one else." So as not to commit such a blunder care must be taken in speaking to the husband before having the full assent of the wife. If she is innocent she will have no reason to oppose the conference, if she is guilty, that is to say, if she has had relations with other persons she will without doubt take you at once into her confidence.—*Medical and Surgical Reporter.*

RECTAL INJECTIONS.

THE employment of enemata as a means of relieving diseased conditions, while not a new therapeutic measure, is a valuable one, and its merits demand more attention at the hands of practitioners than they have heretofore received. In presenting the subject for consideration at this time, however, it is not deemed advisable to discuss the advantages of medication by means of rectal injections, as the benefits to be derived from the use of water are so numerous and apparent that medicated enemata may be left to the good judgment and intelligence of the physician.

Originally employed for the removal of retained fæces, the practice doubtless fell into disuse owing to the fact that relief might often be obtained by the exhibition of irritant purgatives, an alternation which the laity were quick to appreciate, while they were quite willing to believe that causes which produced like effects must be interchangeable. This is far from being the case, clinical evidence showing beyond question that most purgatives, both directly and indirectly, produce more or less derangement of function, hence the means used to overcome one disease but precipitates another, and chronic maladies, many of them brought about by this cause alone, furnish ample opportunities for the industrious and promising quack.

Philosophy aside, the value of flushing the colon with properly sterilized water, hot, tepid or cold, according to the special indications present, will be readily admitted in a long list of formidable diseases, some of which may be mentioned, as follows: Habitual constipation, with or without mental depression or active cerebral manifestations due to auto-infection, being so common, might be permitted to head the list; all occult nervous affections, associated or not with the uric acid diathesis, would naturally attract our notice, as it is well known that disordered innervation is generally conductive to the absorption of poisonous products from the alimentary tract. They are also serviceable in disease dependent upon pelvic congestions, such as uterine displacements, ovarian pains and hæmorrhoids, for they contribute materially, though indirectly, to relieve the original cause, namely, hepatic insufficiency. In appendicitis, perityphlitis and abscess, for which the *amœba coli communi* is now held responsible, they are invaluable. Mild, and even severe cases of dysentery and diar-

rhœa are often brought to a favorable termination without enemata, but it is safe to say that, with appropriate diet, all cases would be decidedly benefited and many fatalities avoided by the adoption of this simple means. Enemata should find a place in the treatment of other disorders of this character, notably in the collapse of cholera morbus, yellow fever and cholera, as well as in the conduct of cases of pleurisy or typhoid fever.—*American Therapeutist.*

THE URIC ACID DIATHESIS IN CHILDREN.

It is well known that in infancy the urine frequently contains free uric acid, and that a deposit of urates is so common as to be almost regarded as normal. They may appear for a considerable time without producing appreciable symptoms. In childhood the continuous presence of uric acid is invariably accompanied by symptoms more or less distinctive. These symptoms are discussed by Sutherland in an interesting paper published in the *British Medical Journal* for April 23. The subjects of this diathesis, he remarks, are often easily recognized. They have small, restless bodies, and are precocious, excitable and nervous, at times bright and cheerful, at others quiet and depressed. They sleep poorly and wake early in the morning; they have dainty and capricious appetites. They take cold readily and perspire freely upon exertion. The feet and hands are usually cold. The pharynx is often relaxed and irritable, causing a harsh cough, most troublesome when the child goes to bed. The tonsils and the adenoid tissues of the naso-pharynx are subject to inflammation, and are frequently found thickened and enlarged. The tongue is coated and the breath foul, and frontal headache is very common. Abdominal pain is common, and is not infrequently located in the right iliac fossa.

When uric acid is being excreted from the system, pain is one of the most prominent symptoms, and may be located in any part of the urinary tract. If the irritation is in one or both kidneys, the pain may be located in the back, passing downward or forward, or it may be felt entirely in the umbilical region. This pain is usually intermitting in character, and may be intense. It is accompanied by nausea and shivering. When the bladder is irritated by the crystals or by the excessive acidity of the urine, the pain is suprapubic and reflected along the urethra to the meatus. The greater the proportion of solid to fluid constituents in the urine, the more marked will be the pain. It is a characteristic of the subjects of this diathesis that they drink moderately but sweat profusely, the result being that the amount of urine passed is small.—*New York Medical Journal.*

SURGERY.

SURGERY OF THE GALL-BLADDER AND DUCTS.

The increasing interest exhibited by surgeons in the serious consequences resulting from any obstruction to the flow of bile from the liver, has been characterized by greater activity in affording surgical relief for these troubles. Various operative measures touching the gall-bladder and ducts, with crushing of gall-stones, have brought about a revolution not only in the theoretic views of sur-

geons, but in their surgical appliances. A new era has dawned upon gall-bladder surgery, and old things are passing away, to be consigned to the sea of oblivion.

While the operation of natural cholecystotomy has been done, in a large number of cases by different surgeons, there has been no material improvement in its techique or in its final benefit to the patient.

The organic changes to which cholecystectomy is usually thought to be best adapted have not been encountered so often as to require this measure in many cases; yet the good results in a large proportion of the operations reported warrant its adoption under certain conditions, and I have suggested that in excising the gall-bladder its upper wall should be left adherent to the liver.

Incision and suture of the wall of the common bile-duct for the removal of gall-stones have been practised in twelve cases, with only one fatal result from the operation. Three of the cases have been operated on by Courvoisier, and one by each of the following named: Kummell, Heusner, Kuster, Rehn, Braun, Frank, Hochenegg, Marcy, and Vander Veer.

The development of the possibilities of benefit from the anastomosis of the gall-bladder and the common bile-duct with the duodenum and other divisions of the intestinal canal has lately occupied the earnest attention of surgeons. When the natural outlet for the bile becomes obstructed, it is recognized as proper to effect an artificial passage for it into the intestine. A new departure in operative measures consists in connecting the walls of the common duct with the duodenum, as was done in a case reported in the *Deutsche Medicinische Wochenschrift*, September 3, 1891.

A woman, forty year old, suffered from the usual concomitants of biliary obstruction. After the abdomen was opened, the cystic duct was mistaken for the common duct, and the latter for the duodenum. A stone found in the first was pressed into the distended common duct, and the passage was supposed to be free; but in a subsequent operation, a stone was found in the cystic duct and a second at the portal channel; the second stone was crushed. The common duct filled immediately with bile, and in order to provide an outlet it became necessary to connect the walls of the duct and of the duodenum, by incising each and bringing them together with stitches. In doing this, some bile necessarily flowed into the wound, but no serious disturbance followed. Three months afterward the patient had recovered from all trouble, and it is to be inferred that the communication between the common duct and the duodenum was maintained.

A modification of cholecystotomy, proposed by Wölfler, has been adopted in a few cases, in which all abnormal accumulations are removed from the sac, and the ducts are freed of any concretions, with a fair prospect of the full restoration of their functions. The incision in the wall of the gall-bladder is closed, and then attached by sutures to the parietal incision. It is provided in this operation that when the union of the incised wall of the gall-bladder shall be completed, a separation of the attachment to the external parietes shall be effected, so as to allow the gall-bladder to be free. This process is based upon a doubt as to the efficiency of suturing the tissues of the sac; and in case of any yielding of the stitches, to favor the escape of the bile through the parietal wound, instead of into the peritoneum. While the presence of freshly produced bile is not

proved to be productive of serious results, this procedure implies an abundance of caution against the contingency of failure in suturing the sac.

In the ordinary process of attaching the incised wall of the gall-bladder to an opening in the abdomen, styled natural cholecystotomy, with a view of providing an outlet lor the bile, there is no provision for utilizing this discharge from the liver. When the ducts are patulous, leading into the gall-bladder and into the duodenum, the process of ideal cholecystotomy by emptying the contents of the gall-bladder and closing the incision of the walls, dropping this viscus into the abdomen, has been attended with satisfactory results, and a successful case has recently been reported by Hardon.

It would appear, however, that all cases of obstruction of the cystic and common ducts by gall-stones, call for their dislodgement by one or another procedure, to afford an outlet for the bile; and that the attachment of the incision in the gall-bladder to the opening in the wall of the abdomen, leading to a discharge of the bile externally, should be regarded as a mere temporary recourse. In the event of failure to effect an outlet for the bile through the common duct, cholecystenterostomy is clearly indicated.

As to the portion of the intestine that should be selected for the attachment of the gall-bladder or the ductus choledochus, we have a definite guide in the entrance of the bile naturally into the duodenum; and the nearer to this point that an anastomosis can be effected, the better the result that may be expected. The relations of the duodenum and jejunum to the gall-bladder are ordinarily such as to facilitate their union, and I have given the preference to the duodenum from physiological considerations as well as from surgical convenience, while objecting to the colon.

It is, of course, presumed that there is such an occlusion of the common bile-duct as to prove irremediable by other means, before proceeding with an operation to effect an outlet for the bile by uniting the gall-bladder with the intestinal canal. A misunderstanding of this condition has led to misapprehension of the end to be attained by duodeno-cholecystostomy or cholecystenterostomy, and, once for all, let me say that it is only warranted by occlusion of the common duct. While each of the several operations may be indicated in special cases, the present outlook of anastomotic procedures for conveying the bile from the liver into the intestinal canal in case of obstruction of the common duct is entitled to precedence in gall-bladder surgery.

All of our resources being exhausted without relief to the impediment for the discharge of bile through the ductus choledochus, and finding the integrity of the gall-bladder favorable for its attachment to some portion of the intestine, we may rest assured that we shall be able to effect an opening from the former into the latter by which the bile shall subserve its legitimate purpose in the animal economy.

The various procedures adopted by Golzi, Page, and myself in our experiments upon dogs were undertaken with a view to guide others in the performance of operations upon the human being. This work must hold a place similar to that of pioneers who have gone forth to blaze out the paths in an unexplored region and have set up danger-signals to caution the unwary traveller that may come after them in the search for a route that shall lead to the goal of his expecta-

tions. Some quagmires and quicksands were encountered by us that may be avoided by others. All must allow that the fruit of our experience has thrown much light upon the intestinal labyrinth in which we groped without a guide to direct us at that period.

My efforts were directed at the outset mainly to the establishment of a fistulous communication between the gall-bladder and the duodenum by means of an elastic ligature passed through their approximated walls. This was surrounded with a circular or an oval continuous suture of catgut, so as to effect the immediate adhesion of the serous surfaces; but it was subsequently found that a single stitch of silk thread united the surfaces and ultimately cut its way through the two approximated walls so as to effect a communication between the gall-bladder and the duodenum.

The difficulties encountered in ligating the common bile-duct subsequently were the greatest obstacles to the final success of this operation, and would not be encountered in case of preëxisting occlusion, which is the condition demanding operation in the human subject.

These and other experiments, undertaken upon twenty-one dogs, are illustrated in the cuts accompanying my paper laid before the British medical association. It may be stated, however, that my conception of the procedures indicated were not limited to the means employed in these experiments, and it was distinctly set forth that some other process might be found preferable, and it rests with surgeons to adopt that which proves best.

A number of operations have been referred to by Ross, as undertaken by different surgeons, with a view of securing the results aimed at; and I cannot perform a more profitable service to the profession than to present some of the details, gathered from various sources.

To Nussbaum is attributed the first suggestion of relieving the occlusion of the common bile-duct by conveying the bile into the intestinal canal through artificial openings in the adherent walls of the gall-bladder and the intestine; but the credit of having first accomplished this result upon the human being is undoubtedly due to Von Winiwarter; and it affords me the greatest satisfaction to award him the honor of priority in the execution of cholecystenterostomy.

We are informed that between the 20th of July, 1880, and the 14th of November, 1881, he treated for sixteen months a man, aged thirty-four years, who suffered from obstruction of the common bile-duct, and who was subjected to six different operations for the formation of a fistula between the gall-bladder and the colon.

All kinds of difficulties thwarted this undertaking, but it is claimed that the surgeon eventually succeeded in attaching the gall-bladder to a coil of the small intestine, and effecting a fistulous communication, by which the bile escapes into the intestinal canal, thus obviating the inconveniences of an external outlet.

After a lapse of six years, during which the various experiments on dogs by Golzi, Page, and myself, were performed, Monastyrski united the gall-bladder with the jejunum, on the 4th of June, 1887. He incised the abdominal wall, punctured the gall-bladder, incised its walls and those of the jejunum, and sutured the edges with catgut. A fistulous communication was secured two

meters below the duodenum, but death ensued ultimately from carcinoma of the head of the pancreas, as verified by the autopsy.

The operation of Kappeler came next in the order of time, being done on the 6th of July, 1887, by uniting the gall-bladder with the ileum by Wölfler's suture. The patient progressed favorably for a time, and returned to work, but eventually died on September 9, 1888, fifteen months after the operation. The autopsy showed that a fistula had been established about eight feet from the ileo-cecal valve, and that its intestinal orifice was provided with a valve that allowed the contents of the gall-bladder to pass into the intestine, but prevented the passage of intestinal contents into the gall-bladder. Doubtless a similar provision exists in all such cases.

In the year following the operation of Kappeler, Fritsche established a fistulous opening from the gall-bladder into the jejunum, three meters below the pylorus. At the post-mortem examination a carcinoma of the size of a walnut was found at the mouth of the common bile-duct. Socin and Bardenheuer each attached the gall-bladder to a loop of the small intestine. The case of the latter died in the fourth week, and no fistula was found. It is said that the operation was done with elastic ligatures.

On March 2, 1889, Robson operated upon a patient that had previously been subjected to cholecystotomy, when the ducts were found, and the gall-bladder was attached to the abdominal wall by firm adhesions. The common duct subsequently becoming occluded, an incision was made through the scar from the former operation, in the semi-lunar line, and it was found that the attachment of the gall-bladder could only be effected with the colon. Both were incised, and united with chromic catgut in two rows. The former external fistula was closed by suture, and a drainage-tube was inserted in the wound. After one day, bile came out of the drainage-tube, and also fecal matter from the intestinal wound. In spite of this complication, a speedy recovery, with the appearance of bilious matter in the feces, is reported.

On July 13, 1889, Terrier performed an operation for the relief of occlusion of the common duct. An incision was made in the median line above the navel. The gall-bladder was punctured and the contents evacuated. Upon incising its walls and exploring its cavity no stones were found and the cystic duct was open. In the oblong enlargement of the common duct was impacted a gall-stone which could not be removed. After attaching the gall-bladder to the duodenum by a circular or oblong row of catgut sutures and before tying the last stitches, the walls of both were incised and a rubber drainage-tube was introduced, so as to pass from the cavity of the gall-bladder into the duodenum. The fundus of the gall-bladder was sutured to the lower angle of the external incision, which was then closed by catgut sutures. There was fever until August 1, but the itching and jaundice gradually disappeared. The drainage-tube passed off with the evacuations nine days after the operation, and the stools gave evidence of the presence of bile. The external wound healed by first intention. The patient was dismissed on August 10 in ordinary health.

This patient died in the spring of 1890 from influenza and no gall-stone was found in the common bile-duct.

Courvoisier, in like manner with Robson, performed the operation of natural cholecystotomy upon a patient, without obtaining a satisfactory result. After

the lapse of a year, complications arose that demanded the performance of cholecystenterostomy, and this was done on the 28th of March, 1890. An incision was made through the abdominal wall, below the ribs, along the border of the liver. The gall-bladder was detached from the abdominal wall, and after incising the sac, the gall-stone was removed from the common duct and others scooped from the hepatic ducts.

An incision into the lower surface of the gall-bladder was united to the colon by an oval row of catgut sutures, and before putting in the last stitches the wall of the colon was incised. The fistulous parts of the gall-bladder were cut away and the edges stitched. Two drainage tubes were inserted and the external wound was closed around them. There was no fever after April 2. Bile was found on the dressings, but its source was not determined. Bile appeared in the stools on the 6th of April, and on the 8th the drainage tubes were removed and the external wound was sutured. On the 15th of April the patient was free from jaundice and got up feeling very well. The case was dismissed about the middle of May, and in the middle of July her condition was excellent. There was no more colic or jaundice.

Courvoisier thus sums up the result of these seven cases. One case operated upon died, as a consequence of a complication which should not be charged to the method. All the others recovered from the operations, but in four of the cases the carcinomatous condition of the pancreas caused death at a later period. A definite final cure is claimed only in the cases of Robson and Courvoisier, in which, it will be remembered, the gall-bladder was attached to the colon, not by choice but from necessity.

The practicability of effecting an outlet from the gall-bladder into the intestinal canal can no longer be doubted, and in the view of Courvoisier it stands more and more securely as the details from trustworthy sources become more widely disseminated.

The indications for the operation are formulated by him as follows:

(1) When biliary fistulæ are difficult of removal, whether traumatic, ulcerative, or operative.

(2) In permanent obstruction of the common bile-duct (except in cases of gall-stones).

(3) In traumatic and ulcerative communications between the common duct and the abdominal wall.

Operation is contra-indicated:

(1) When the patients have grown very feeble, in which cases provisional cholecystostomy might be performed.

(2) When the common duct is obstructed by gall-stones, in which cases cholelithotomy, with stitching or lithotripsy, is indicated.

Chavasse has reported in the *Lancet* an interesting case in which an anastomosis between the gall-bladder and the colon was effected by a process differing materially from the previous operations. A man, forty-eight years old, had undergone chelocystotomy for the relief of jaundice, dependent upon biliary obstruction by calculi, which was followed by the persistence of a biliary fistula. Other measures failing, with the aid of Senn's bone-plates a communication was established between the gall-bladder and the colon at its hepatic flexure. At first, bile and fecal matter were discharged through the abdominal wound, but

ultimately this closed, the stools were passed naturally, and the general condition of the patient was much improved.

Korte also reports a successful case of the union of the gall-bladder with the duodenum, after the manner of Terrier, thus affording two favorable results from duodeno-cholecystotomy.

So far as the operations are to be considered, those of Kappeler and Terrier were successes, and being added to the other six cases with finally good results, we have eight cures of twelve in which the operation of cholecystenterostomy has been successfully performed, being a mortality of only twenty-five per cent. from the operations.

This encourages the expectations with improved methods of obtaining a satisfactory solution of the problem of relief for occlusion of the common bile-duct. While other means may be employed for correcting temporary obstructions of the ducts, the great desideratum in occlusion of the common duct is to provide an artificial opening from the gall-bladder or duct into the duodenum or the adjacent portion of the intestinal canal.—J. McFadden Gaston, M. D., in *Medical News.*

PEDIATRICS.

OUGHT INFANTS TO BE WASHED IMMEDIATELY AFTER BIRTH?

In a paper read before the section on diseases of children at the Detroit meeting of the American medical association, Dr. F. S. Parsons, of Boston, says:

All wild animals wash their young directly after birth. The human mother, however, cannot perform such duties in the manner of the lower animals, whose offspring, moreover, are covered with hair, necessitating simply the drying of a wet surface; but the child, with practically no hair on the body, is ushered from an aqueous solution at a temperature of about 100° Fahrenheit, to an aerial temperature of from 20° to 30° lower. Apparently to guard against this sudden cold, Nature has placed a sebaceous covering, which, if allowed to remain, would protect the child from the chilling influences of the reduced temperature. Dr. Parsons, however, does not so much object to the washing of the child as to the manner in which it is generally done, and which so often leads to catarrhal troubles, varying from simple snuffles to broncho-pneumonia. He recommends a little skirt with sleeves and hood, made of some soft unirritating material—for example, Canton flannel—in which the infant should be placed, after being quickly rubbed with pure hog's lard. Here it should remain for four or five days, when it would become accustomed to the lowered temperature, and could with much more safety be washed; but as this would not satisfy the average mother, he would advise covering the head and body with lard, then quickly placing the child in a tub of water at about 103° Fahrenheit, there cleaning and washing the body with a soft linen cloth.

He has never seen a child so treated suffer from catarrhal troubles in any way.—*Medical News.*

PATHOLOGY.

METASTASES OF THE ENTERIC FEVER BACILLUS.

Rosin and Hirschel (*Deutsche Medicinische Wochenschrift*, June 2, 1892) say that in the various suppurating metastatic foci in enteric fever, typhoid bacilli alone or mixed with the ordinary pyogenic organisms have been found. In the furuncles and abscesses seen during convalescence from enteric fever, the staphylococcus and but rarely the streptococcus has been found alone by one of the authors. A case of enteric fever is then reported in which there appeared about the twentieth day a swelling of the size of a five-mark piece near the tuberosity of the left tibia. There was also œdema of the left foot and leg. An incision was made into this swelling. No pus came out of it, but a piece of necrotic tissue was found in it. Cultivation experiments amply proved the micro-organism present to be Eberth's bacillus alone. The authors could not absolutely exclude the periosteal origin of the swelling, but the infiltration was apparently in the muscle substance. The thrombosis of some important vein produced the œdema. The authors suggest that in the cases of suppuration where typhoid bacilli have alone been found, other micro-organisms being less resistant may possibly have perished. It has, however, been shown that injections of typhoid bacilli may produce an abscess, and it is possible that under certain conditions the micro-organisms may produce suppuration in the human subject. The above case shows that typhoid bacilli may cause an infiltration which does not break down into pus, and which gradually disappears.—*British Medical Journal.*

MEDICAL MELANGE.

Military Surgery in Relation to the New Firearms.—Von Bardeleben (*Centralblatt für Chirurgie*, June 11, 1892) says, as the result of adoption of the new military weapons, many of the wounded will recover more readily than in former wars. As a result of the late Chilian war, many more were killed, because the new projectile has much more penetrating power. The author recommends that the military surgeon on the field should simply do what is absolutely necessary, since, by the adoption of antiseptic precaution, the wounded can be sent to almost any distance to military hospitals.—*Therapeutic Gazette.*

The Palliative Treatment of Carcinoma Uteri with Alcohol.—Schultz (*Centralblatt für Gynäkologie*, 1892, Number XIII) reports ten cases of cancer of the cervix uteri treated by injections of alcohol. He uses absolute alcohol, injecting from one to two cubic centimetres at one sitting. In one case forty-eight injections were made at intervals of a day or two. There is little pain, provided that the needle is plunged deeply into the diseased tissue. Most of the alcohol escapes after withdrawing the needle, bringing away with it broken-down tissue. In the cases reported the treatment resulted in diminution of the diseased area, with the gradual formation of healthy epithelium over it. Hæmorrhage and foul discharge ceased and there was a notable improvement in the patient's general health.—*American Journal of the Medical Sciences.*

For difficult digestion accompanied by constipation the following formula is highly recommended:

℞	Cascara Aromatic (Stearns'), . . .	fl℥j
	Fluid Extract Erythroxylon, . . .	fl℥iij
	Tinct. Nucis Vomicæ, ...	
	Tinct. Belladonnæ, ...	
	Tinct. Physostigmatis, ...	āā fl℥ij

Misce. Signa.—A teaspoonful t. d. after meals.

The Treatment of Heart-Failure from Chloroform.—(Die Methode der Wiederbelebung bei Herztod nach Chloroformeinathmung: *Berliner klin. Wochenschrift*, 1892, page 265). Maass describes a method in use in the clinic at Göttingen by which the heart can be made to resume its action after apparently fatal paralysis from chloroform. The method consists in rapid impulses given to the region of the heart by the hand of the surgeon. The latter stands on the patient's left side and lays his right hand on the left side of the chest, so that the ball of the thumb lies half-way between the apex-beat and the sternum, while his left hand applied to the right side of the chest steadies it, and then makes rapid compressing motions with the right hand, as many as one hundred and twenty to the minute. Maass relates two cases in which the patients were revived by this method perseveringly applied for half an hour or more, although they were apparently hopelessly lost, for whenever the compression was interrupted the heart-contractions ceased. The respiration, however, continued spontaneously, although very shallow in character.—*International Medical Magazine.*

Peroxide of Hydrogen.—The use of this preparation, so effectual in many conditions as a pus-destroyer, has quite recently been remarkably extended. It has not only been advised in the medical press and in society discussions for almost every morbid condition of the throat and nose, but has also been lauded by the daily press as a cure for various ailments and diseases of afflicted humanity. It has, as a natural result, been employed indiscriminately in large quantities, both in weak and in strong solution. Bad results are certain to follow such use even of a less potent drug. A note of warning against its indiscriminate use in the throat was recently sounded by Dr. A. Jacobi at a meeting of the American pediatric society. A weak solution of the purest preparation will irritate some throats. In some patients it seems to possess the power of corroding the mucous membrane or of causing the formation of a thin pseudo-membranous coating. It seems also to have a decidedly detrimental effect upon certain diphtheritic throats, and marked improvement at once takes place upon its discontinuance. In view of facts recently reported by reliable observers, the conslusion seems inevitable that peroxide of hydrogen is a preparation to be used with extreme caution in the nose and throat.—*New York Medical Journal.*

Vegetable Diet.—The very strict ascetic sect of vegetarians who only live upon seeds and uncooked food look down upon their weaker brethren who eat eggs and milk and butter, in fact, everything which does not necessitate the taking of life; which appears to me to be the only reasonable stand-point. It is certain that the giving up of animal food cures many illnesses which no medicine

can reach. Everybody knows the bad effects of butcher's meat in gout and rheumatism. In affections of the heart it is often the only remedy, and the wonderful results are not difficult to explain in a case where rest often means cure, if one reflects that while the meat eater's heart has seventy-two beats in the minute, the vegetarian's only has fifty-eight beats, therefore twenty thousand beats less in the course of the twenty-four hours. Insomnia and nervousness are affected in the same way; there is less wear and more repose in the constitution. I could enumerate many other illnesses in which vegetable diet does marvels, but will only mention those of the skin. Most vegetarians have unusually clear and often beautiful complexions. I need only remind those who know them of the old Carthusian and Trappist monks, who all have smooth white and pink *Fra Beato Angelico* kind of faces, which are not found among the orders that do not habitually live on Lenten fare. The splendid teeth of the Italian peasantry, who never touch meat, speak for themselves, and it is the same in other countries where the people live under similar conditions. It is foolish to associate vegetable diet with temperance, as so many do; they are quite astonished to see a vegetable eater drinking wine or beer. One thing, however, is true, namely: that it is far easier to cure a drunkard if you deprive him of meat, because, as Dr. Jackson, head doctor of the asylum for dipsomaniacs, Danville, New York, says, "It is clear that meat contains some not nutritious particles, which excite the nervous system so much that it at last becomes exhausted and unstrung. In this state of exhaustion unhealthy reaction follows, which brings on a paroxysm and violent desire for spirits and the excitement which they create." G. Bünge, professor of physiological chemistry at the university of Bâle, writes, in his book on vegetarianism: "The appetite of the drunkard is directed almost exclusively to animal food, and vegetarians are quite right when they teach that spirit drinking and excessive use of animal food are in connection with each other." Vegetarianism is often called a fad, but it is a healthy and innocent one and the natural reaction against the present state of things. It imparts lightness and elasticity to the body, brightness and clearness to the mind. The vegetarians I know are all unusually strong, active and young looking people for their age; one of them walked without stopping for thirty-four, and another time twenty-seven hours, without a rest, while on an excursion in Norway, feats not easily equaled by the most inveterate beef eater. Traveling, mountain climbing, all seems easier and less fatiguing on this light and soothing diet; and why should it not give strength to the limbs and sinews if one reflects that all the strongest animals who do the heaviest work in the world, like horses, oxen and elephants, are entirely herbivorous? It is not my intention to be understood to say that I look upon vegetable diet, even with its necessary accompaniments of fresh air, frequent ablutions, gymnastics and exercise as a panacea for everything, and that medicines become useless. We are mortal, and there is no perfection in this imperfect world. Nobody has a greater belief than I have in remedies judiciously given during illness, but it is the many who are out of health and below par, without hardly knowing what is the matter with them, who would be all the better for trying whether their discomforts spring from too high and rich a diet or from the inability to procure any but inferior meat or fish.—Lady Paget in the *Nineteenth Century* for April.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

CONSERVATISM IN SURGERY.

By EUGENE BOISE, M. D., Grand Rapids, Michigan.

During no period has surgery made more rapid or more notable advance than in the past ten or fifteen years. In every department the best and most earnest efforts of the brightest minds have been put forth. Operations undreamed of a few years ago are every day performed, and pathological conditions, universally considered incurable, are daily yielding to the surgeon's skill. In no department of surgery has there been greater advance than in gynecology. So rapid has it been that the attention of the professional world is turned toward it. And those voices which are not heard in admiration and encouragement are loud in condemnation.

In the treatment of many of the diseases of the pelvic viscera there has been a complete revolution. Not many years ago uterine fibroids were almost universally let alone or treated palliatively. Some, not satisfied with this, hoped much from the administration of muriate of ammonia or ergot. A few attempted the removal by morcellation of those which were intra-uterine. Occasionally, when the extremity of the case demanded it, one, bolder than the others, removed the entire uterus as early as 1825. Electricity was tried as early as 1871, but fitfully and uncertainly, till Apostoli finally in the last six or eight years established it firmly as a rational and valuable mode of treatment. His teaching has been followed by a large army of pupils whose enthusiasm almost leads them to claim that it should supersede the knife. The laparotomist, on the other hand, is unable to see the benefits claimed, and pronounces it even more harmful than useful.

Vaginal hysterectomy for fibroids was performed by Kottman and by Pean in 1882. Now the technique has been so perfected that in proper cases, no one whose knowledge keeps pace with the times, hesitates to recommend it. Abdomi-

nal hysterectomy for fibroids was performed as early as 1825, and from that time at intervals, rare because of the extreme danger of the operation, till Koeberle's operation, December 19, 1863. He so perfected the technique and his published report was so complete, that the operation was established as fully justifiable from that time. Various modifications in the several details of the operation have been made from time to time. The elastic ligature was first employed by Kleiberg in 1876, modified by Martin in 1878, and is now used practically as then. Schroeder announced his intra-peritoneal method of treating the pedicle in 1878, and his method, unmodified in any important particular, is used by many operators to-day. In 1889 Martin advocated total extirpation of the uterus, and now this method is finding many enthusiastic advocates, the technique being gradually perfected till in ordinary cases it is comparatively free from danger. In 1876, Trenholme and Hegar each advocated castration for the cure of fibroids, and to-day, this is, in proper cases, the established method. Pozzi says it should be employed in every case where its performance is less grave than hysterectomy, and where the latter is not especially indicated by compression phenomena.

In the treatment of cancer of the cervix uteri, amputation of the cervix has been performed for more than twenty years, and now is being urged by many warm advocates as against total extirpation. It is not in order in this article to give even a résumé of the various arguments urged, but it seems that the majority is in favor of entire removal of the diseased organ. As summed up by Pozzi: "For my part, I think that total hysterectomy is preferable to removal of the cervix, even when the disease is circumscribed, for it alone gives security that the whole of the affected part has been removed, and the mortality of the operation has been so far reduced that it does not materially exceed that of cervical amputation." In cancer of the cervix and body, total extirpation of the organ, by the vagina, is the only procedure advocated in suitable cases. Freund's description of his abdominal method in 1878 caused it to be very generally tried, but the technique was so faulty that it fell into disfavor. Czerny, searching for a better way, advocated the vaginal operation in 1879. Since this time it has made very rapid strides in favor, the debatable ground now being whether to use clamps or ligatures to secure the broad ligaments. Cancer of the cervix, extending to the vagina, was, till very recently, treated only palliatively. Pozzi, even, saying "this invasion is an absolute contra-indication to any radical operation." But within a very short time successful cases have been reported where the entire uterus with the upper third of the vagina was removed, the cases not only making good recoveries, but showing no tendency to a return of the disease. This, then, is taking its place among the curative possibilities.

In the treatment of retro-displacements the pessary has been the sole reliance of physicians for many years, and even now has its strenuous advocates, as against recourse to any surgical procedure. But conscientious gynecologists have never been satisfied. In December, 1881, Alexander made his first successful operation for restoration by shortening the round ligaments, not describing the operation till 1883. Adams made the same operation at about the same time. Their success caused a wave of excitement among those who were dissatisfied with the then prevailing incompleteness of all methods of dealing with

these displacements, and it was tried everywhere with varying results, finally being given up by reason of the difficulty experienced in finding the ligaments. Recently Dr. Edebohls, of New York, has revived this operation in a modified form which is so successful that it promises to become a standard operation. Other operators have sought to remedy these displacements in cases not suitable for the modified Alexander's operation, by fixing the replaced uterus to the abdominal walls. This was tried in various ways, and is still being modified as to technique, the principle remaining the same. Other methods of obtaining the same result have been advocated, but have not found general favor.

To remedy the distressing condition known as procidentia, efforts have been made, at least ever since 1825, when Marshall Hall performed what he even then termed colporrhaphy. In 1865 Sims described his operation which has been the basis of the various methods of colporrhaphy practiced since then. More recently the round ligaments were shortened for the purpose of retaining the procident uterus in its normal place, but failed. Finally the majority of good operators advocated and practiced hysterectomy for the relief of the patient, but more recently the desired result has been obtained by the combined operations of amputation of the cervix, anterior and posterior colporrhaphy, perineorrhaphy, and fixation of the body of the uterus to the abdominal walls.

But it is in the treatment of diseased ovaries and tubes that the aid of laparotomy has been most frequently invoked, and has rendered almost incalculable service, notwithstanding its abuse by some unscrupulous or over-zealous operators. By its means has it been possible to study the pathology of pelvic diseases, and thus render diagnosis clear. By its means have conditions been rendered curable which only a few years ago condemned the woman to a life of suffering. But against no procedure has the clamor of unscientific criticism been greater. So great is it, that even now in every town and city, women are left to die from recurring pelvic peritonitis, and cellulitis—or pelvic abscess, unaided, when they might be restored to health if the physician had the courage to face unintelligent criticism. Laparotomy is justifiable for the cure of sterility when there is any reason to believe that it is caused by adhesions or occlusion of the tubes—even when the woman is free from pain and seems in perfect health.

Again, extra-uterine pregnancy, which was only occasionally recognized several years ago, is found, by means of the more accurate methods of diagnosis made possible by the frequent laparotomies, to be a condition by no means rare. And while formerly women died from collapse from some unknown cause, or at best were able to drag out the remainder of not very long lives in constant suffering, more or less severe,—now the knife brings life and health. As early as 1863 hypodermic injections of strychnine were employed to kill the fœtus. Later, morphine was used in the same manner, and even now finds ardent advocates. Electricity also, which has been used at intervals for several years, is now often employed even by skilled surgeons, in the hope that it will kill the fœtus and promote absorption—but they watch the case closely and hold themselves in readiness to perform laparotomy at a moment's notice.

This rapid advance toward perfection in diagnosis and treatment in these various branches, has been brought about by the earnest efforts of truly conservative surgeons, who have devoted their best energies to seeking some method by which the great rate of mortality in these various diseases might be lessened

—men who appreciated their responsibility as conservators of the health and lives of their patients. True conservatism in surgery is the highest regard for the physical welfare of the patient with a proper regard for life. It calls for skill in diagnosis, knowledge of the means possible for relief, and judgment as to the application of those methods. We have read frequent warnings from men qualified to speak, under the cry of conservatism, against the indiscriminate performance of these critical operations by men not thoroughly qualified. We hear, every day, criticisim severe and unqualified, from men who are not competent to perform these operations, that such operations are unjustifiable and even criminal. Such criticism comes only from men who have made no effort to qualify themselves, either by education or by observation, and who are content to wander blindly on in those methods of treatment which bring dollars to the physician but no relief to the patient—methods which are condemned by men who have earned the right to speak by the lives they have saved, and the suffering they have relieved. But true conservatism in surgery embraces more than that such operations as are now demanded by a due regard for the patient's life and health should not be attempted (except in emergencies) by one who has not qualified himself by thorough study and long observation of others.

The highest regard for conservatism demands that *all* means should be employed that will bring relief, with due regard to life. When a pathological condition exists that will surely result in death, any surgical procedure that gives a chance of life is conservative. When a pathological condition exists that will cause life-long suffering, any surgical procedure that will relieve that suffering without too great risk of life, is conservative. Physicians should use all available means to qualify themselves to diagnose existing conditions. They should use all possible means to qualify themselves to use the most effective methods, surgical or other, to remedy those existing pathological conditions; and while conservatism in surgery demands that none should operate except those so qualified, it also much more demands that all means operative or other, shall be employed that are compatible with the best interests of the patient, without regard to personal or popular criticism. More lives have been sacrificed by that false conservatism that councils delay, than by untimely resort to operation.

THE CARE OF THE NASAL PASSAGES DURING CHILDHOOD.

By W. F. STRANGWAYS, M. D., M. C. P. S. O., Etc., Flint, Michigan.

When the history of the medical profession for the last quarter of the nineteenth century is written, the page devoted to the progress of preventive medicine will stand forth far more glorious than all others. What tremendous efforts for the prevention of disease are being made by thousands and thousands of faithful, unselfish, and ever toiling physicians, and what immense results are being obtained. The carelessness, prejudice and indifference of the masses are being overcome, while selfish interests are being driven to the wall in the general weal of all. We have beheaded sepsis and environed with almost insurmountable barriers the many contagious and infectious diseases, and on and on we go in reaching forward to prevent disease, but still there are fields wofully neglected and probably none more so than the care of the nasal passages in childhood.

Until within the last few years we believed olfaction was the great and only function of these passages, but we now know that this sense of smelling is but a very secondary consideration. Standing at the gateway to the lungs these passages are ever on guard and ever working to prepare the air for the more delicate and more vital respiratory organs. How quickly the healthy nasal organs detect the slightest obnoxious elements which from time to time vitiate the air, and what wonders they perform in warming, moistening and purifying. If we pass into the bitter cold blasts of the winter's storm how quickly the respiratory parts of these passages arm themselves for the fray. No cold air can pass them. Up they swell and call for increased currents of warm blood and give forth heat so that the sensitive lungs remain ignorant of the freezing winds without. Again, the dry, parching air would rush in and lick up all moisture so necessary for the bronchi and lungs but before it reaches them the nares have done their duty and the dryness is gone.

Ever and anon some other part of the body is chilled and owing to a peculiar, mysterious influence we have a cold in the head. Do we then remember the faithful and important work of these much abused and neglected servants? Do we go to their relief? Oh no! a cold in the head never kills. Leave it alone. It will get well of itself. We know there is a close sympathy between the skin and these passages, and that the burden of this sympathy falls on the latter. We also know the various causes of colds, but how causes applied to the surface of the body affect distant organs is still a great mystery but, nevertheless, a very important fact when we consider diseases of the nasal passages, to which we pay but little attention unless disagreeable sensations force us to do so. If we have a cold in the chest we try to gain a complete cure lest the trouble become chronic, but we let a cold in the head run its course while we bother our brains over the fact that there is so much catarrhal trouble.

Between the months of November and May every general practitioner sees scores of children with a cold in the head, yet how rare it is to find him prescribing for it, in fact the general practitioner has but little faith in his own treatment as he has given such matters little or no study. As colds in the head do not kill a child, and as there is an impression abroad that catarrh cannot be cured, which is more or less supported by careless practitioners, parents are very indifferent. Still it is pleasing to notice in this respect a great change for the better during the last few years, and we have good reasons for thinking that in the near future the profession and the laity will recognize the importance of caring for the nasal passages in childhood, and then catarrh, like small-pox, will be practically abolished and the general health of the people correspondingly improved. It is true our mode of life does not prepare us for the many exposures it necessitates, yet we are making great advances and we must remember that savages as well as animals are free from this class of complaints.

We give the above to draw attention to, suggest thoughts on, and gain an interest in the subject of, this article, and now we shall proceed to discuss some matters relating more particularly to troubles in the nasal passages during childhood. First, and very important is the law that every cold has a tendency to leave some chronic inflammation. Second, and very important, is the fact that every child which takes cold in the head easily or frequently suffers from some form of chronic rhinitis which should be treated and cured, and until such

treatment is given the child will be liable to colds from every slight cause. Third, it is very important for us to remember that the lumen of the nasal passages in childhood is very small and is easily destroyed by retained secretions. Fourth, all retained secretions act as irritants and perpetuate chronic rhinitis. A discharge from the nares does not invariably represent too free secretion. It more frequently represents an altered secretion and occasionally a lessened secretion where the currents of air take up the aqueous part too rapidly, leaving the more solid parts to form a discharge.

A large part of the catarrhal troubles of adult life may be traced to the carelessness of parents and physicians who allow colds in the head during early life to pass untreated, as spots of chronic inflammation are left which in later years develop more pronounced troubles. These spots of chronic inflammation gradually increase in area and are easily fanned into acute exacerbations. They also cast off more debris than is normal and this debris is too frequently left somewhere in the nasal cavities to act as a local irritant, and the patient says he catches cold so easily that he never knows how he caught it. He does not catch cold. He produces a cold by local irritation, and such colds have less constitutional disturbances as the whole process is local. Again, in childhood the passages are so small that a small amount of secretions retained obstruct the ingress and egress of the air and brings into play another deleterious influence. The child tries to breathe through the normal channels, but owing to the occlusion more or less vacuum is produced which causes increased swelling and is said to be the principal cause of posterior hypertrophy. These retained secretions frequently decompose and we wonder why the breath is bad, or perchance we are puzzled over enlarged glands situated at the angle of the jaw, forgetting that our anatomy teaches that there are active absorbent structures in the nasal passages which send their fluids through these glands on their way to the general circulation.

The first step towards preventing and curing catarrhal troubles in the nasal passages is to gain good vigorous health. Constitutional treatment is often of the utmost importance, but we must remember that a child may have perfect health as far as we can see and yet not have the power to resist the evil influence of cold, damp air, especially if in motion. Such a child is not inured to cold. It gives off heat too rapidly or cannot endure the loss. Possibly it is like a hothouse plant, never allowed out in the cold, or it may be is muffled with an excess of clothing and sleeps in feathers with many quilts over it. To lessen radiation of heat from the surface of the body we must be able to quickly lessen the amount of blood circulating in the integument. We lose much of this power if we keep the surface of the body continually surrounded by warmth, such as is obtained by too much clothing, too warm rooms, etc. Cold baths, especially the shower and plunge baths, are among the best tonics to the skin, and if properly persevered in will greatly diminish the heat radiation. Short exposures to cold air are useful. Frequent frictions or rubbings applied to the whole surface of the body increase the amount of epithelial covering, which has a powerful influence in controlling heat radiation.

Woolen clothing is always desirable, not only because it is a good heat retainer, but because being rough it increases the amount of epithelial covering. Owing to its interspaces it is a good ventilator and absorbent of perspira-

tion. Special attention should be given to the protection of children's feet, as for some reason children do not tolerate the rapid radiation of heat from the feet, especially if they are damp. Heavy soles are very necessary. Children should be taught to lay off all extra clothing as soon as they enter warm rooms, otherwise the vessels near the surface of the body become relaxed and allow a rapid loss of heat if exposed to cold air, and frequently colds are contracted in this way. The power of generating heat to take the place of radiation heat is a child's greatest protection. A healthy, vigorous child should generate large quantities of heat and will do so if it has proper diet and plenty of active exercise, especially outdoor exercise.

Active physical exercise causes more rapid and greatly augmented circulation, hence more active tissue changes. Old tissues are thrown off and new tissues take their places, and in this way we have a newer, healthier, and more vigorous body, which readily tolerates loss of heat. Not only can it stand the loss of heat but the metamorphosis of new and vigorous tissues generates more heat to take the place of radiation heat.

The next part of this subject is the medicinal, and it requires much thought and good judgment. Every physician has his own way of managing a cold during the acute stage, and but little need be said on that part of the treatment. Anything which restores heat and tends to sweating is good. For local applications warm alkaline solutions are good. Bicarbonate of soda and biborate of soda, thirty grains of each in one pint of warm or hot water, likewise solution of boric acid, while many prefer to put one teaspoonful of the compound tincture of benzoin into a pint of hot water and have the child inhale the steam for ten minutes twice a day. While every physician has his own way of managing a cold during the acute stage, there seems to be but one way for all physicians to manage it after the acute stage is over and that way is to leave it alone, and by doing so they too frequently allow a chronic rhinitis to develop. As the acute symptoms subside the discharge becomes thicker and is inclined to lodge in the passages which are so very small in childhood. Too much stress cannot be placed on the law that the nasal passages of children must be kept free and clean, for all clinical experience shows that retained secretions are the greatest perpetuating cause of chronic rhinitis. To keep them clean is not so difficult if we begin early and are persistent. Any occlusion of these passages is very annoying to an infant, and it will readily submit to the necessary cleansing efforts and then rewards the anxious, tired mother by passing into a quiet sleep. As the child grows older it will not willingly submit to any occlusion, but will even ask its parents to wash out the passages.

The best and easiest way to use a detergent with an infant is to pour it into the nostrils with a tea-spoon. The temperature of the detergent should be about 90° Fahrenheit, and only a few drops need be poured in at once. Those few drops soften and liquefy retained secretions so that they readily pass out. The semi-recumbent position is generally secured, but a more erect posture is equally good. As infants swallow much of the detergent it should be of an innocent nature and agreeable to the stomach. Older children may snuff the solution from the palm of the hand or from a sponge, but still better use an atomizer, which is so very convenient that children will continue to use it much longer than anything else and this is no small recommendation. The spray should be

directed a little outward and almost directly backward to avoid striking with force the upper meati and the septum, which are much more sensitive than the inferior turbinates and the floor of the nose.

Many children have apparently healthy nasal passages, save for occasional hard, dry secretions found in the anterior part. Parents should be taught to look for such crusts and remove them when found. If the crust is not readily dislodged by a spray and gentle blowing of the nose, assistance may be given by using a suitable instrument. One frequently used is a very light, small hair-pin. Great gentleness is imperative, lest the little one learn to dread such interference.

When a child takes cold frequently and makes a good and complete recovery apparently, it is only apparently. Such a child should have a careful rhiniscopic examination, and, as a rule, some small local spots of trouble will be found, which, if properly treated, will return to the normal healthy state, and the child will be kept out of the ranks of sufferers from so-called catarrh.

If a child takes cold frequently but does not fully recover, it has a more serious local trouble, probably involving the inferior turbinate bodies and the septum, and it is here we find such grand results from rational treatment. For building up such a child's health and developing a constitutional power to endure atmospheric changes of all kinds, we should give close attention to the hygienic principles referred to in the first part of this article. In addition to such hygienic efforts, the nares should be frequently cleansed with a suitable detergent, and the physician should apply to the diseased spot stimulating alteratives. Iodine and chromic acid have well deserved popularity. An excellent formula for the form is one or two grains with twice as much potassium iodide in an ounce of water. The strength should be lessened or increased to cause a little burning or smarting and some turgescence. It may be used with an atomizer, but it must not be given to the patient to use as freely or lightly as the father or mother may judge right. The physician should use and watch the effects. The directions for the use of chromic acid could not be given in an article like this. Much damage may be done by the unskillful use of so powerful a remedy.

Another child has the snuffles from earliest infancy, which, if not treated, causes flattening of the nasal arch, distortion of the nasal passages, and narrowing of the chest. The flattening of the nasal arch spoils the personal appearance, the distortion of the nasal passages tends to keep up and produce the worst forms of rhinitis, while the narrowing of the chest lessens the general physical strength. Such a child requires great hygienic care, and internal treatment as well as local. As a rule it has some dycrasia, and if properly treated is quickly restored to health. For it, boric acid with a little glycerine in water forms an excellent cleansing and strengthening wash.

Some children have a habit of picking the nose, and will not, or rather cannot, stop the disgusting practice. Here we find dry crusts, and very frequently small but irritating abrasions. The scales should be removed, and a mild ointment of oxide of mercury, flavus, or ten to twenty grains solution of silver nitrate, applied to the abrasions. It is cruel to whip such children. Many adults with the same trouble are forced to seek relief in the same way.

Another class is the mouth breather. The expression of the face is weak, vacant, and in extreme cases almost semi-idotic. The voice has lost its nasal resonance, and the consonants, m and n, are not well articulated. Here we have

the post-nasal adenoid growths, which should be promptly removed as they seriously interfere with mental, as well as physical, development. After removal, astringent detergents, with general constitutional treatment, completes the cure. All children should be taught to not hold the nose tightly when blowing it, lest the blowing force some of the secretions or medicinal applications into the accessory cavities, or eventually lessen the tension of the membrani tympani. The handkerchief should be held at the end of the nose, but not pressed against it. Forcible blowing of the nose excites secretions and tends to keep up local troubles. Salt and water is a very popular remedy which often does much good, but it is a dangerous one and should not be used. For some reason salt solutions have a very evil influence on the ear if any passes into the Eustachian canal.

TUBO-OVARIAN DISEASES.

By HOWARD W. QUIRK, M. D., Cleveland, Ohio.

To treat diseases of the ovaries and tubes successfully requires a knowledge of three things, namely, a knowledge of the social environments of the patient, a knowledge of the causes of these diseases, and a knowledge of the remedies and procedures that will alleviate or cure them in the various and manifold forms in which they present themselves. That social status does figure in the direction of our therapeusis may be questioned by some; but it is self-evident that, as in orthopedic surgery, we must abopt that method which will leave our patient the best fitted to fill that vocation in life of which from necessity she has made a choice; and no fixed rule can be laid down for every case, but each must be a law unto itself, and each be equally within the realm of proper treatment. We cannot wisely resort to and take the risks of conservatism and expectancy with a patient who does menial labor as we can with one of affluence, one upon whom a kindly nature has smiled, blessed with all the care and comfort that wealth can bestow. Nor can we trust a case that is caused by non-development the same as we can one due to extrinsic causes, for one requires an intimate knowledge of general or systemic therapeusis, a knowledge of the laws of growth and development, not only of the physical being, but also psychologically. Perhaps there is no other class of diseases in which mind and body are so intimately blended. It is perhaps the highest ambition of the human female to be womanly in the broadest sense of the term; to feel, and to have others feel, that she has been endowed with all the graces and powers that make her an ideal Eve. Her maternal feelings are sacred to her; and why does she continually retain this happy mental picture? Because her reproductive and generative processes are healthy, and sending perfect images to the retina of her mind's eye. But allow these to become diseased, and at once this force which in health has been a stimulus and a tonic to all the other processes of nature's economy, now acts as a poison, and if the case is of long duration, we have a diseased nervous system, a deranged digestion, an impoverished blood; a state of chronic invalidism, if you please, which the removal of the diseased parts will not always correct; at least, we must expect nearly as long a course of treatment for its correction as it has taken nature to produce these changes. We must divert the mind into healthy channels at the same time that we are correcting the pathological

changes, and make use of this force to aid us in accomplishing a cure. The reason that so many of the laity are skeptical about all gynecological procedures, both major and minor, is because they are unable to realize why, after the removal of a diseased ovary, they cannot as quickly recover as after the amputation of a diseased toe, or other offending member. And perhaps the surgeon may in part be responsible for this state of affairs by giving too sanguine a prognosis, and losing all interest in the case as soon as the operation is accomplished. We must tell our patients frankly that time is a great element in accomplishing a cure, and not take all the glory unto ourselves, lest we lose it all. A case of this nature came under my observation not long ago, in which Dr. Joseph Price, of Philadelphia, had removed one of the appendages. The patient and her family expected a rapid cure, and after waiting several months in vain for the relief of the pain, sought solace in a faith curess, who diverted her mind into the proper channels, gave her sympathy and encouragement, good care and good food, and in a few months she was well. But the faith cure doctress received the credit of curing her which rightly belonged to Dr. Price.

Of the three great plans of treatment, namely, medicinal and expectant, electrical, and surgical, each has had its ebb and flow tide in popular thought, and each has been sufficiently tried to warrant us in saying that all are good, and have a useful sphere. At present there seems to be a slight wave towards conservatism, that has followed a perhaps somewhat radical surgical period. Of the three methods, possibly the surgical will serve us the best and most often, until such a time as preventive measures shall tend to make these conditions less virulent and less frequent, or until the people shall become educated to seek relief at an earlier stage of the disease.

That the medicinal and expectant plan of treatment will prove useful is too often illustrated to be disputed in those cases of subinvolution where the uterus, tubes, ovaries and broad ligaments are all subject to this hyperplasia, for we have the same hyperplasia or subinvolution existing in the ovaries, tubes and broad ligaments, as we do in the uterus. We may have this condition wherever there is muscular tissue; it frequently follows abortion. The continuous use of the vaginal douche, the packing of the vagina with glycerized, boro-glycerized or boro-alum-glycerized wool, if there is much relaxation, or a tampon composed of both cotton and wool, the center composed of elastic wool (but in the great majority of cases a long strip of wool will serve a better purpose, if applied properly, than any special form, and be more easily worn and removed without any trouble to the patient), the occasional application of iodine to the endometrium and vaginal vault, and avoiding the elevation of the uterus above the normal line, and in some cases the administration of ergot, with proper attention to the general health, will cure a large per cent. of these cases. Weir Mitchell's rest cure, which I have found not possible to carry out in many cases, may aid us; still we must not expect too much from it. I recall a case which came under my observation about five years ago—a young woman, who had been in Dr. Mitchell's hospital for a number of months for the relief of a condition of this nature. A forced recumbent posture, and forced alimentation had been practiced. She improved, and gained considerably in flesh, and returned home; but as soon as she again resumed the erect posture, her muscles being weak and flabby, her former condition returned in a more aggravated form than before. The glycer-

ized tampon serves two purposes; it elevates the contents of the pelvis to its proper level, thus allowing the ligaments to contract. The glycerine, by virtue of its strong affinity for water, depletes the tissues, at the same time the turgescent blood-vessels are emptied by osmosis and pressure or support. It thus lessens the tendency to menorrhagia and metrorrhagia, which are frequent accompaniments, if not always present. This condition is subacute, one of passive hyperæmia, and as an adjunct the stimulation of the faradic quantity current will prove useful, with the cup electrode applied to the cervix, the other to the sacrum or abdomen. Currents of intensity, and the galvanic current, should be avoided, as it is a general action that is aimed at, and not local; they cause destruction and inflammation, just the condition we are trying to prevent.

Where the appendages are dragged down and prolapsed, as a result of a retroverted and prolapsed uterus, then the cause of this must be sought and corrected, either by tampons, suitable pessary, or repairing the vaginal outlet, if torn. But the performing of perineorraphy will not correct a great many cases where the ligaments have been long stretched; then the combining with it of Edebohl's modification of the Alexander-Adams operation of shortening the round ligaments presents itself as the proper treatment. Of course, this can only be done where there are no adhesions. In this connection I wish to refer to a condition which I have never seen described; that is, inguinal hernia dependent upon a displaced uterus, and the dragging open of the canal by the round ligaments at the same time that the natural plug to the canal, the round ligament, is stretched out into a thin cord. The canal is thus left open at the same time as the intra-abdominal pressure is directed from the back of the pelvis to its anterior aspect by the uterus and broad ligaments. The knuckle of intestine thus readily finds its way into the canal. A case with this seeming explanation has come under my care recently, and I have advised, and shall perform, Edebohl's modification of the Alexander-Adams operation, and thus, while the displacement is corrected, a radical cure of the hernia also secured. She has a lacerated perineum, and perineorraphy will be done at the same sitting. This is the second case of this kind that I have seen that could be readily explained in this way, and I believe it to be a potent cause of inguinal hernia.

In that class of cases due to non-development, the infantile uterus and imperfectly developed ovaries and tubes, a small anteflexed uterus, the tubes will often be shorter, convoluted and tortuous, the ovaries not painful or sensitive to the touch. The uterus and appendages will not have that elastic feeling which we notice in health; the vaginal mucous membrane is often dry, and its epithelium lustreless; sometimes flakes of inspissated mucous are found. The uterine ligaments, broad ligaments, tubes and ovaries are held so taut as to lead one to almost suspect adhesion. Anæmia, amenorrhœa, dysmenorrhœa, cold extremities, sallow skin, aversion for exertion or society, palpitation, constipation, etc., these many little deflections from the normal health line that serve to make up this condition, must receive our patient attention separately and collectively. The digestion, bowels, and skin must be stimulated to a more healthy action. Iron and arsenic are the sheet anchors as a blood tonic, while cantharides will soon relieve the coldness of the extremities. Apiol, and others of its class, may prove useful, but should not receive the laudation given them by some. At the same time that these sytemic measures are being carried out, we must dilate the uterus,

stimulate its endometrium with iodine, and wash out the vagina with mercuric bichloride. But we must not, as is often done, use the glycerized tampon, as it is too depleting and will cause a local anæmia, or an aggravation of that condition which already exists and which we are trying to correct. It is in this condition that electricity can be brought so serviceably into use, by both local and general electrization. There is another condition that comes properly under this class. It is that of those patients whose vital forces are diverted from ovulation and the generative organs in general, to the production of adipose. These patients are always fat, and may or may not be anæmic; if not, the local stimulation of these organs, by electricity and otherwise, is the proper course to pursue. This is the class of patients that Lawson Tait calls non-development of the ovaries, and thinks that the largest class of non-development of the ovaries exists in those otherwise perfectly developed. I prefer to consider it a mal- or miscarried-nutrition, as the local stimulation and direction of nutrition to the parts proves. Massage is useful, especially to those contorted and paretic tubes. At the same time that this treatment is being carried out, these patients must be placed in the most healthy and stimulating mental surroundings by being kept in a mixed society.

The treatment of salpingitis will be governed in part by the stage in which it comes under observation, and in part by the social status of the patient. The danger to life in these cases, if left to nature, has been, I believe, greatly exaggerated. That there are cases that are dangerous to life is admitted, but they are rare as compared to the great number of cases. That electricity or massage cannot be used in this disease without doing harm is undoubtedly true. That squeezing or pounding of an inflamed and perhaps distended tube by massage is as foolish as it is illogical, cannot be gainsaid. There are cases in the catarrhal form, which are seen before the exuded plastic lymph has become organized into adhesive bands, and these resulting cicatricial bands have contracted. In this stage of the disease, like the acute, we can, by the use of the hot vaginal douche, the above-referred-to glycerized tampons, filling of the rectum daily with warm water, and allowing it to remain as long as it can be retained with the pelvis elevated—we can by these means expect a relief from those distressing symptoms, such as the dragging feeling in region of ovary, tube and sacrum; also of the pain in pelvis, and along the course of the crural and other nerves. The patient may not be rendered sterile, even though the cilia of the epithelium of the tube are destroyed, if the vermicular or peristaltic action of the tubes is preserved, and the tube has not been rendered impervious; for I believe that we may have stricture of the tube the same as we have in the male urethra; and that the inflammation of the tube caused by the gonorrhœal gonococcus of Neiser is peculiarly liable to cause this condition. And I think that sterility more frequently follows the gonorrhœal inflammation of the tube than after abortion or parturition, but that the latter is more liable to cause pyosalpinx than the former. But a woman suffering from a pyosalpinx following abortion frequently contracts gonorrhœa; then we have a condition that is unfortunately difficult to cure, and it is in these pus sacs that gonococci have been found upon removing them. The percentage of pus tubes in those who have never either aborted, or passed through the parturient stage, is particularly small. If endometritis, as there commonly is, the proper treatment will depend somewhat upon the existing condition there found.

If it is due to gonorrhœal infection, and the discharge is of a greenish hue, the application of a fifty per cent. solution of zinc chloride will often prove useful; and if the os is open and patulous, packing of the uterus very lightly for twelve hours with candle-wicking soaked in the borated-alum-glycerine solution, which the patient can remove herself often, if a string is attached to it, or if it is left long in the vagina. If the case follows abortion, or the post-parturient period, then often we will have a sanopurulent discharge; then the use of the dull curette, followed by topical application of iodine, instead of the zinc solution, and the other measures referred to, will be proper. The discharge will become very much less or cease entirely, and in many cases an apparent cure, followed by conception. Of course, it is only in those cases that are bilateral in which sterility can exist. Dr. Martin, of Berlin, found in two hundred and eighty-seven laparotomies for tubal disease that both tubes were involved in about twenty-five per cent. of the puerpural, fifty per cent. of the gonorrhœal, and forty per cent. of the tubercular cases. These percentages, as they were composed of cases serious enough to demand laparotomy, would probably be greater than in the milder cases under consideration. But unfortunately a great many cases do not come under observation until the tubes and ovaries are destroyed, not only functionally, but histologically; whether that be by cystic degeneration of the ovary, chronic oöphoritis, or hydro- or pyosalpinx, their complete removal by laparotomy is indicated. That there are certain conditions which modify this general rule is true, as where the tubes have long been the subject of catarrhal inflammation which seems to have run its course, and after destroying the mucous membrane, all discharge has ceased, with a chronic adherent tube and ovary, and all the peri-ovarian and peri-tubal tissues glued in one mass at the bottom of the pelvis; the change of nutrition incident to the climacteria may have hastened this process, the parts having become so acclimated to their new condition and situation as to cause little pain or inconvenience. These cases should not be operated upon if the general condition is good, as it often is. Dr. Martin reports four cases where the tubes had been the subject of inflammation, but which had ceased, leaving a hypertrophied and adherent tube. I have known women to go through life with periodical discharges of pus per os uteri which probably came from the tube. This is true also of hydrosalpinx, and is due to occlusion of the distal end of the tube and a patulous approximal end. Many of these patients enjoy pretty fair general health, and the advisability of operating upon them will depend upon the care they can have. If the disease is stationary in women past the menopause, operation may be deferred. Dr. Baldy, of Philadelphia, makes it a rule never to operate where the general health is not impaired, and believes that those patients weakened by long suffering and pain recover more rapidly, and that the operations on them are apt to be more successful than in those whose general condition is good.

Dr. Martin's efforts at conservatism by removing only that portion of the adnexia that is diseased, seems not to have proved as satisfactory as was hoped for, and a large per cent. of them have required a second operation; but this is a step in the right direction. Trendelenburg's position, while not having come into common use, may have advantages where the tumor is small, and the adhesions are numerous and difficult to separate. But probably the surgeon, in separating adhesions, more often uses the sense of touch than the eye, and

regulates the force used by his better judgment as to the friability of the tissues. If the position is used, chloroform should be given instead of ether, on account of its tendency to render the brain anæmic. A diaphragm should be formed by a large flat sponge to prevent the gravitated fluids from coming too extensively in contact with the abdominal viscera during the operation. Before laparotomy is performed, we should weigh the possibility of the sequellæ which may follow it. Dr. Hanks, of New York, is responsible for the statement that there is one ventral hernia to every ten laparotomies performed in New York. As etiological factors, he believes the giving away of the fascial planes to be the principal ones; he had seen five cases in three months. For the prevention of this, he advises that too hot, or too strong antiseptic solutions should not be used. He uses two sets of sutures, and suggests that the deeper ones should not be tied too tightly, and if a drainage tube is used, to draw it up one-third of its length at the end of twenty hours, and remove it entirely on the third day, if there is no purulent discharge. He also removes the dressings on the second day. This is probably too soon to remove the dressings as a rule, and the drainage tube should be avoided except in rare cases. Dr. T. A. Emmet uses silver wire, believing that the use of silk or catgut wrinkles the opposing edges of the wound, and may cause union of the peritoneum and skin, and that this is a frequent cause of hernia. Dr. Byford believes it due to necrosed fat, and other bruised tissues. Dr. Dudley P. Allen, of Cleveland, uses silkworm gut, and fortifies the wound by passing two sutures through all the tissues down to the peritoneum at a distance of one inch from the margin of the wound and ties them tightly. It is probably a defective union of the facial surfaces that are the principal etiological factors, and if two sets of sutures are used, one should be applied only to the fascia. But doubtless one set of sutures is sufficient if applied close enough together, and when they are tied to have like tissues in apposition. There seems to be a great diversity of opinion as to what is the best material to be used as a suture. Many use silkworm gut; Emmett and others, the wire; and Skene, the waxed, braided silk. Probably silkworm gut is employed the most often of any material, and it is doubtless the best, as it is easily manipulated, easily rendered and kept aseptic, sufficiently stiff not to pucker and displace the apposed surfaces, and removed with facility. Mural abscess may occur; its occurence is due to either improperly sterilized sutures, especially if silk is used, or to the use of too large or an improperly shaped needle. For here we have the most favorable condition for opening the aperture of the needle puncture, by the rectus muscle acting longitudinally and the transversalis and oblique muscles antero-posteriorly; especially is this true if fibres are cut transversely by a Hagerdorn needle, instead of being separated by either a round or spear-pointed one. That insanity follows the removal of the appendages any more frequently than after any other operation does not seem to have been proved; on the contrary, Dr. Baldy found only fifteen cases in eighteen insane asylums. He also found in other operations of various natures, that out of eighteen operations on both sexes, eight were in women and ten in men. Dr. Mary Putnam Jacoby believes insanity following laparotomy to be due to reflex action from the healing of the peritoneum. If insanity followed every adhesion of the female peritoneum, there would not be enough sane women to mother a more sane theory than the above. Pain is one of the most frequent sequellæ following the removal of the appendages, and he

who removes them for its relief, like he who removes them for nervous affections, will share the same sad disappointments. The pain seems to be dependent upon a variety of causes. Unequal intra-abdominal pressure seems to be a factor in prolonging it, at least in some cases; and the renewing of too tight an abdominal supporter, which had forced the abdominal contents into the pelvis served to relieve one case of mine. Others were relieved by applying a light support where none had been worn. In others, the pain appears to be caused by failure to remove all of the ovarian or tubal tissue; in such cases it will continue until its atrophy or absorption. The complete removal of all this tissue, if possible, is essential, as it is apt to prolong convalescence by keeping up metrorrhagia. In some cases where ventral fixation had been done, the location of the pain would indicate that it was due to the stretching of the utero-sacral ligaments. A continuance of the pain is considered a continuance of the disease by the patient, and its relief a cure. Thus while it may not be the *summum bonum* of our treatment, we should so direct our efforts, if possible, as to leave the patient not only free from structural disease, but also free from pain.

LECTURES.

RÉSUMÉ OF SURGICAL CASES.

By J. B. HAMILTON, M. D., LL. D., Chicago, Illinois.
PROFESSOR OF THE PRINCIPLES OF SURGERY AND CLINICAL SURGERY IN RUSH MEDICAL COLLEGE.

Ulceration of the Leg, Following Fracture.—There was undoubtedly in this case fracture of both bones of the leg and non-union, but it is possible it could not be prevented. It is not fair to the attending surgeon, after an injury has all healed, for another surgeon to pass judgment on it, for the reason that there are cases so mangled and torn up that the saving of the foot at all is a creditabe thing to the surgeon in charge. Many times a foot is so broken and mangled that it is impossible to put on any form of retention apparatus at the time, and therefore one should be very careful in criticizing the results of operations that come to them, unless they have themselves known of the condition and circumstances of the case at the time of the injury.

The question before us is, What can we do to relieve the condition which is present now? On examination I find that there is a distinct thickening of the ankle-joint. It is one-third wider than the other one. There is a filling in of the natural hollow in front and alongside the tendo Achilles. There is a distortion above the malleolus, doubtless due to the over-lapping of the fragments at the time of the injury. The circulation in the limb is very defective, as manifested by varicose veins over the tibia, by the discoloration of the skin which is present, and by the general sluggishness and scaly appearance of the skin, making it look pachydermatous. If the ulceration were due to necrosed bone, of course the indication would be simple, but this ulcer is mainly due to defective return circulation. Massage, practiced three times a day for many months, might do something to restore the limb to its normal condition; but we could never entirely reduce the size of this ankle to that of its fellow, and an elastic support of some kind is absolutely necessary. But I should hope more from

massage in this case than anything else. Massage, you understand, does not merely mean rubbing of the surface; it means the careful picking up of the tendons, so far as may be done through the skin, pressing the vessels along the part so that the circulation is fully restored deeper than the skin and quite down to the muscular structures. It is probable that this man is not so situated as to go to a professional masseur and have the operation performed so often; in that event, some member of his family might be trained by the attending surgeon to do the work fairly well. I would recommend the application of an elastic stocking in this case which will press uniformly over every portion of the leg, in that way favoring return circulation very much. If the conditions were all favorable, if we had a perfectly good circulation, we might cut down and restore the bones to their normal lines, but if we should make such an operation, the chances are there would be failure in the healing process. We must first bring about healthy circulation in the leg before we do anything in the way of surgical measures.

VARICOCELE.—The case which I next present to you has been diagnosticated as varicocele, or varicose veins. I cannot make a positive diagnosis at this time, for varicocele largely disappears when the patient lies on his back; so I shall accept the diagnosis given me by the attendant. I shall proceed to cut down upon the veins and they will come distinctly into view, and their tortuous condition will show that they are varicosed. One of the points in diagnosis is that when a patient lies on his back. the tortuous veins become nearly empty, and the swelling materially disappears.

At the operation, an assistant seizes the testicle at this point, while with the thumb and finger of the other hand we stretch the scrotum, and when an incision is made from the external ring downwards through the skin and fascia in the direction of the cord, the cremasteric fascia is divided, and the cord then comes into view. We see here a very large vein. You can see these tortuous, twisted veins convoluted and full of blood. The diagnosis of varicocele was made while the patient was standing up, and it is entirely correct. I shall now dissect these veins from the surrounding fascia. I now proceed to separate the vas deferens and the spermatic arteries from these veins. I do so by passing my fingers along the fascia posterior to the spermatic veins. Alongside of it there are the spermatic arteries. I pass forceps directly through the tissues close to the veins, I seize the ligature, the end is then tied in order to prevent hemorrhage. We place the forceps on and cut directly across; the veins are separated now as far as seems necessary or practicable. Forceps are again passed through the tissues; we apply a double ligature, one on each side, of catgut, tied tightly. I have tied the lower end of both sides. We will now cut off the veins, thus removing a section of about two inches of the spermatic veins. There is no more hemorrhage. We now close the wound, sponging it with a little bichloride of mercury. The wound is sewed up without drainage, a suspensory bandage is applied; an extremely simple operation, yet very radical inasmuch as it entirely destroys the disease. As to serious effects on the testicle, there need be no fear of any if care be taken to exclude the spermatic artery and the cord. This is a matter which can be easily done, as owing to the firm texture of the cord it is easily separated from the adjacent tissues.

HARE-LIP.—We have here a case of single hare-lip. It is not very bad, but

yet it is enongh to cause considerable deformity. I shall in this case make the usual Malgaigne operation of first repairing the edges of this cleft, leaving the vermillion border longer than the edges of the wound, separate the cheek from the intermaxillary process, and shall then fasten them together with hare-lip pins and one fine apposition suture directly in the vermillion border. I use hare-lip pins for the reason that the only failures I have ever had have been from sutures. A baby is bound to cry when anything hurts it, and as it cries it tears apart the sutures. I therefore have returned to the ancient practice of using hare-lip pins in these cases. Since I have done so, I have not had any difficulty in obtaining union where the tension is not too great. I am just informed that the supply of hare-lip pins is exhausted, so instead I shall use round needles. I thrust the pins through and bring them together with a figure of eight suture, but I bring the vermillion border of the lip with a fine suture out; before approximating the other portions of the lip, I approximate the mucous border. That is done to give a correct edge to the lip and prevent that notch so frequently observed in these cases. I feel sure of the apposition we have in this case, and I know that the needles are not going to give way, no matter how much the child cries.

SINUS IN THE BACK.—We have here a sinus in the back, opposite the eighth dorsal vertebra, from which a great deal of pus is flowing. As I pass the probe horizontally alongside the vertebral spine just inside the angle of the rib for a distance of five or six inches—at least, the length of the probe—I cannot tell from what wound the pus comes, but I am satisfied it comes from bone somewhere. The proper course to pursue in such cases is to lay open this fistulous tract. We will now carefully sponge it out and seek for the direction in which the pus is flowing. As I have cut out that portion which was the easiest to reach, we can now see by careful examination where the pus has come from. We observe an old fistulous lining. The fistulous tract is quite well defined; the wall of the fistula is as separate and distinct from the other tissues as can be, having its lining almost like the sheath of a tendon. I have now arrived at the vertebral spine, and the tract which I have followed for nearly eight inches seems to have ended. There is no carious bone, so I shall curette the track—"grattage"—pack with iodoform gauze and expect healing from the bottom by granulation.

CLINICS.

SURGICAL CASES.

SERVICE OF G. FRANK LYDSTON, M. D., CHICAGO, ILLINOIS.

PROFESSOR OF THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS AND SYPHILOLOGY IN THE CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS.

EXPLORATORY LAPAROTOMY FOR SUPPOSED HEPATIC ABSCESS.

W. A., aged forty years, previously healthy, was referred to me by Dr. James A. Lydston for a pemphigoid eruption upon the forehead, lips, and chin, which had existed for about two weeks prior to his consulting me. At the time of his first visit to me the patient seemed to be considerably prostrated and had a temperature of 102° Fahrenheit. There was no diarrhœa, and there had been

no prodromal symptoms suggestive of typhoid, yet I suspected the patient was coming down with some form of continued fever; I therefore referred him back to Dr. Lydston for treatment at his home. The eruption upon the face lasted for three or four weeks, successive crops of bullæ appearing and disappearing, and some of the blebs taking on a purpuric aspect. The eruption finally disappeared. In the meantime the patient developed what was apparently malarial fever of the remittent type. There was at no time evidences of typhoid. I saw him in consultation two weeks after he took to bed and he seemed to be doing very well, temperature never having ranged higher than 103½°. Careful examination of abdomen showed nothing abnormal at this time. At the end of four weeks the fever had completely disappeared, the temperature remaining normal for nearly a week. At the end of this time, however, the patient had a chill, and the temperature suddenly rose to 104°. I saw him again in consultation. On examination of the abdomen I found the liver moderately enlarged. The patient had a succession of chills, followed by fever for several days. The fever then became of a remittent character and night sweats developed. The temperature ranged from 101° in the morning to 104° in the evening for several weeks. During this time I made several examinations in consultation. I found that the enlargement of the liver had steadily increased, and there was considerable tenderness on even slight pressure. Patient progressively emaciated, and no remedial measures seem to have the slightest effect. I made the probable diagnosis of suppurative hepatitis, and suggested an exploratory laparotomy, which was consented to. I performed the operation with the assistance of Drs. William Cuthbertson and J. A. Lydston. I found the liver enormously enlarged, but could find no point of fluctuation. I introduced an exploring needle at a number of points in the substance of the liver, but without result. As the patient was suffering from considerable shock, I irrigated the abdomen with hot water, and closed the abdominal wound in the usual manner. The patient reacted nicely from the operation, but died on the fourth day thereafter apparently from exhaustion. No autopsy was permitted. It is possible that, as I originally suspected, an abscess of the liver existed, but was overlooked. Certainly the history of the case and the *ensemble* of symptoms, both objective and subjective, warranted the presumptive diagnosis, which, in my opinion, indicated an exploratory laparotomy.

FRACTURE OF THE FEMUR FROM MUSCULAR VIOLENCE.

THE following case is a very interesting and exceptional one. The patient, a man, thirty-seven years of age, had had syphilis, and was suffering from insipient pulmonary tuberculosis. He had led a very dissipated life and had been a very hard drinker up to within a month of the time when the accident, which is to be related, occurred.

One stormy night the patient slipped upon the icy sidewalk, and in endeavoring to keep himself from falling caught hold of a lamp post and checked himself violently as he was going over backwards. As he did so, he heard a snaping sound and felt something give way in his right thigh with accompaning severe pain. Finding himself unable to stand, he let himself down upon the sidewalk, where he lay calling for help for some little time, till he was finally found by some passers-by and taken to his home, which was but a few doors away. I

saw him about two hours after the accident and found the right femur fractured obliquely at the junction of the lower with the middle third. After reduction, which was accomplished with no difficulty, I put on Buck's extension in the usual manner, a moderate weight being sufficient to retain the fragments in proper position. Notwithstanding the fact that the patient disarranged my splints three or four times within the first three weeks, I succeeded in securing a very excellent result, union being firm in the usual time, and the shortening being so slight that the patient jocularly remarked that the leg was longer than the other. This patient afterwards developed a tubercular testis, which was removed by operation, and he finally died about two years after the fracture of the femur of pulmonary tuberculosis. No other fractures occurred.

The existence of tuberculosis in this patient, coupled with the evident fragility of the femur, would seem to suggest the possibility at least of osseous tuberculosis at the point of the fracture. The prompt and perfect union, however, would appear to militate against this theory. That the dissipated habits and previous syphilis of the patient may have had something to do with the osseous fragility is highly probably. There is no question in my mind as to the fracture having been produced by muscular violence. The patient had not been drinking and was an exceptionally intelligent man, and I unhesitatingly accept his story of the manner in which the accident happened. I interrogated him very carefully upon the question as to whether he experienced the "snapping of the bone," as he expressed it, before or at the time of his fall upon the sidewalk, and he was absolutely positive that he did not fall until after the bone had given way and he found himself unable to stand.

PERINEPHRITIC ABSCESS FOLLOWING AN ATTACK OF NEPHRITIC COLIC.

This very interesting case was kindly referred to me by Dr. J. G. Brill. The patient, a young man, seventeen years of age, previously perfectly healthy, was suddenly taken with the characteristic symptoms of renal colic. There was profound prostration, nausea, and vomiting, cold, clammy perspiration, circulatory depression, severe paroxysmal pain in the right ileo-lumbar region, radiating down into the testicle and the anterior aspect of the thigh. Micturition was frequent and painful, the urine scanty and high colored, but containing no blood. Under antispasmodics and emollient applications pain subsided in about forty-eight hours and left the patient comparatively comfortable. He still felt weak, and there was more or less pain on movement. I did not see the case again for about four weeks. During this time the urine had been carefully watched for a calculus, but none had been discovered. A few days after my first visit patient had developed moderate degree of fever, and there was a slight increase in the pain in the right side and back. Hectic finally developed, the fever being distinctly of the remittent type and profuse night sweats developing. Patient became greatly emaciated and was progressively growing worse, and I was called for a second consultation. I found on examination a large tumor presenting in the right side which was distinctly fluctuating. A hypodermic syringe disclosed the presence of pus. I operated immediately, making a free incision about four inches in length, extending downwards and forwards at a point just anterior to the quadratus lumborum and midway between the last rib and the crest of the ilium. An enormous quantity of pus was evacuated. On exploring with my

fingers I distinctly felt the lower border of the kidney free in the cavity of the abscess. The cavity was thoroughly irrigated with hot carbolized water, followed by the peroxide of hydrogen, and a careful search was made for calculus, none however being found. The after-treatment consisted in daily irrigation with peroxide of hydrogen via the drainage tube and the free administration of stimulants and tonics. The patient made a rapid and complete recovery.

The case is a very interesting one as it suggests the possibility of the perinephritic suppuration being due to the tropho-neurotic effect of what was undoubtedly an attack of renal colic from the passage of a calculus. While the abscess may have been due to infection, its source would be difficult to conjecture as there had been no symptoms of pyelitis, and the urine presented at no time evidence of a purulent process in the genito-urinary tract. It is possible that a small stone had escaped from the pelvis of the kidney and was overlooked, but I do not believe that such was the case. Certain it is that the stone which caused the attack of colic, passed into the bladder, inasmuch as the progress of the stone was quite clearly outlined as it gradually descended by the sensations of the patient and the tenderness elicited on pressure. As the case has passed from under my observation, I am unable to say whether or not symptoms of vesical calculus have since supervened.

A case of a similar character has recently come under my observation in which the perinephritic abscess pointing in the loin formed apparently as a consequence of a strain received in a friendly wrestling bout. In this case there was no history of any antecedent disturbance of the genito-urinary tract. Prompt recovery followed evacuation and drainage of the abscess.

CORRESPONDENCE.

LONDON LETTER.

BRITISH MEDICAL ASSOCIATION.

POLITICS and the weather have formed the principal topics of conversation in this country for some time, and next to these themes, perhaps, the meeting of the British association at Edinburgh has been the subject of great importance.

The annual congress of the British medical association has also come and gone. This year it was held at Nottingham, and the attendance was very large, including a greater number than usual of eminent foreign scientists. There always seems to be a feeling among the profession of Great Britain that these conferences, while undoubtedly productive of much good in the cause of medicine, are characterized by a lack of enterprise, and in many instances too many papers are put down on the programme, so that usually some of a very interesting nature are neglected. The committee of management would do well to organize some system to regulate better the length of each discussion, and the business of the meetings generally.

COUNT MATTEI'S CANCER REMEDY.

THIS is essentially the epoch of quackery and its exposure! It is sad, however, to think how long a time elapses between the foisting on the public, with a flourish of trumpets, of some new "cure" and its subsequent condemnation.

No medical man would ever think of disparaging the efforts of one of his brethren to throw light on one of the many obscure subjects concerning medicine; on the contrary, most members of the profession hail with delight any new discovery. When the so-called discovery, however, savours of charlatanry it is time for all honorable doctors to discountenance the matter. Count Mattei's much vaunted remedies for the treatment of cancer may be placed in a niche of the temple of fraud. Several cases of cancer were chosen by the Matteists themselves as suitable for their form of treatment, and have been under investigation for a whole year, but, unfortunately for the expectant human race, the phases of the disease in each case advanced precisely as if no cure had been attempted. The result is, that the persons interested in placing the so-called cure before medical authorities have been obliged to leave the field ignominiously beaten.

At Guy's hospital, intra-venous injection in cases where there has been considerable loss of blood is being performed by injecting large quantities of saline solution at blood temperature. On physiological grounds, it stimulates the heart, and by filling the collapsing veins, renders the task of driving the blood through the vessels much easier. The greatest quantity used as yet has been six pints, and good results followed. In such cases, of course, there is always a drawback, and in this treatment there is great danger of overtaxing the heart, already, perhaps, considerably weakened.

POPULARITY OF WOMEN PHYSICIANS.

THE number of women doctors on the register is one hundred and thirty; one hundred and forty more are in course of training, and everywhere they are gaining ground. Two wards are to be added to the Royal infirmary at Edinburgh, one medical and the other surgical, exclusively for the lady practitioners.

OBSTRUCTED TRACHEOTOMY TUBES IN DIPHTHERIA CASES.

IT is doubtful whether or not it is right to suck an obstructed tracheotomy tube in a diphtheria case with a view to clearing the passage, but certainly it is most courageous. Two men in this country who were both well up in the profession have succumbed to this.

THE KEELEY GOLD CURE.

THIS is essentially the epoch of credulity in patent medicines, and accordingly the Keeley gold cure for inebriates has been causing some little sensation, but the medical profession have shown that they have no confidence in the treatment whatever. Analysis of the so-called remedy reveals something different to what the proprietors claim, and when quacks assert one thing, and science sets a different version on it, the article has little chance of any permanent success. There are of course people who have faith in almost anything, and it is to these that the Keeley people will require to look for support.

PARASITIC CELLS IN CANCEROUS TUMORS.

RESEARCHES lately carried on at the college of physicians and surgeons, London, have led to the discovery of parasitic cells in cancerous tumors. They consist of a nucleus surrounded by protoplasm and a double cell wall, and are

easily stained by aniline dyes. These protogea or parasitic cells are found in the epithelial cells of the growths, not in the fibrous tissues, and vary in number from one to six or seven. Their effect on the cells which they inhabit is irritant, as they set up a process of degeneration and active proliferation in the cells around. The parasites are often destroyed themselves by the white corpuscles of the blood which make attacks on them and gradually absorb and disintegrate them.

This is not, however, the first time a cancer organism has been discovered, but it is hoped that the present one will be of some practical value.

HYPNOTISM IN THE TREATMENT OF STAMMERING.

HYPNOTISM seems to have some beneficial effect on stammering, and some doctors who are adepts in the art are gathering in the shekels with some rapidity.

Ewoc.

EDITORIAL ARTICLES.

MICHIGAN AND THE CHOLERA.

THE presence of Asiatic cholera in our harbors and ports has sounded the tocsin of alarm throughout the land. While it is unwise to minimize the dangers of this fell disease, there is little doubt that present popular conceptions of its virulence being based on past experience of its ravages make inadequate allowance for all the advantageous conditions with which the modern state is encompassed. The course pursued by the disease before the days of antiseptic doctrine might be supposed to be very different to that which it would now pursue, opposed at all points by antiseptic methods and curbed and controlled by the vast resources of modern preventive medicine. The activity and scientific zeal displayed by American health officers in dealing with the grave problem before them, will be accepted as an unmistakable sign of progress, and an index of the true drift of the practitioner's art, which is becoming more and more a mission of prophylaxis. As far as present knowledge indicates, the conduct of the health office in New York has been irreproachable. The influence of Dr. Jenkins has not been restricted to his actual field of labor, and in furnishing a type and example of what a health officer should be, he has perhaps performed his greatest service to the country.

Michigan is admitted on all sides to occupy an unenviable position in the face of any grave epidemic. The state has not only to contend against the dangers arising from the transmission of the disease from native ports, but has also to guard against the greater dangers of contagion from Canadian cities, where municipal sanitation appears backward and defective. The experience of the city of Detroit in quarantining against the Montreal small-pox epidemic will doubtless now prove valuable. It was by the firm and judicious action of the health officer of the city at that time (Dr. Wight) that an outbreak of small-pox was averted. The Detroit Board of Health must not lose the native hue of resolution, and when they start out to do a thing they must recall that it were well done if it were done quickly. It is an ill time for the settlement of questions of status, and a good season for the board to purge itself of all internal bicker-

ings. Quarantine of the suspected, and isolation of the infected are the rational methods of defense to be adopted in an emergency of this kind, and the safety of the citizens is dependent upon the fidelity with which these measures are applied. Quarantine needlessly prescribed means hardship to those concerned, but if prescribed it must be maintained rigorously, and if health officers lack firmness and resolution it is unwise for them to allow their susceptible temperaments to come within range of the emotional appeals of the quarantined.

The medical profession can, perhaps, best aid the good work of prevention by endeavoring to allay public trepidation. The common sense of the American people will prove an efficient antidote to panic, and in the most paroxysmal state of excitement, our citizens are not likely to follow the example of the Russian peasants who endeavored to stop the plague by murdering the physicians and flinging the antiseptics into the rivers. They may, however, become needlessly fretful in the presence of impending danger. The medical profession can materially aid the municipal authorities by advising and encouraging compliance with all proper regulations, but the members of the board of health must remember that in the creation of such a board and in the appointment of a health officer, the profession expect to be relieved from active participation in municipal sanitation, and that to them the profession will look to initiate every essential sanitary reform and to enforce every necessary sanitary regulation.

THE COMMA BACILLUS.

AMONG the noteworthy points in connection with the present cholera epidemic is the effective unanimity of scientific opinion in regard to the etiology of the disease. A few years ago the question whether Koch's celebrated comma bacillus were the actual cause of Asiatic cholera was one which excited lively opposition from those who held adverse views. The progress of bacteriological research has, however, nearly silenced these objections, and to-day Koch stands justified in nearly all the claims he made for his celebrated vibrio.

The manner the microbe effects its entrance into the system has an important etiological significance. Koch was unable to produce the disease in animals by introducing the microbe into the stomach, and only by the injection of large quantities of the culture into the peritoneal cavity could he induce a fatal illness with choleriform symptoms. Many investigators of a sceptical turn of mind exhibited their disbelief in the malignity of the microbe by swallowing it in large quantities. Koch, however, produced an inflammatory disease of the intestine by administering the microbe after neutralizing the acid contents of the stomach by sodium carbonate. Haffkin and Hueppe have obtained similar results, and have produced cholera in guinea pigs by introducing the microbe after a dose of alcohol. These experiments forcibly illustrate the necessity of maintaining the digestive tract in a healthy state of self-defense.

The case of the bacteriologist who was striken down with cholera, while pursuing his avocation in Koch's laboratory was suggestive of a causal relation existing between the disease and the respiratory tract. This inference has received no experimental support as far as the comma bacillus is concerned. Gamaleia's work, however, in connection with the vibrio metschnikowi, a microbe closely allied to the vibrio of Asiatic cholera, has proved that a choleriform

disease results in chickens from the introduction of these organisms through the respiratory tract. The analogy between the vibrio metschnikowi and the comma bacillus and their presumed community of descent, make the possible infection through the respiratory passages a matter worthy the attention of epidemiologists.

The burden of evidence is undoubtedly in favor of the stomach being the organ which first receives this unwelcome visitor to the intestinal canal. You can eat cholera and drink cholera it is said, but you cannot catch cholera as you would the measles. How the microbe escapes the destructive action of the gastric juice is not clearly manifest. Deranged secretions might account for a good deal, or it might be that a glass of water containing the vibrio, taken prior to the acid reaction of the stomach being established, would pass rapidly through that organ over the lesser curvature, and thus escape the natural germicidal action of the juice.

Interesting at the present day are also the experiments of Hueppe and Wood which indicate that the comma bacillus practically undergoes a physiological alternation of generations. As found in water and earth, the comma bacillus is aërobic and requires oxygen for its growth and propagation. These investigators, however, find that it can be gradually acclimatized to an anaërobic mode of life and in this state which resembles the conditions prevailing in the human intestine, it secretes poisonous substances of a high degree of activity. This suggests that while the bacillus may exist in an aërobic form in water, it may assume an anaërobic state in the intestine. The bacilli of the excreta would thus renew their aërobic life, only that they might fortify themselves for the resumption of their malign anaërobic existence.

EDITORIAL BREVITIES.

NATIONAL QUARANTINE.

THE difficulties of maintaining quarantine, and the conflict of authorities, municipal, state and federal, enforce the conviction that in order to secure public safety the quarantine at all ports should be under the control of the federal government. Uniformity in sanitary regulation can only be attained in this way. Inadequate appropriations or faults of administration could then be blamed on a responsible head. Now is the time for the profession to urge the appointment of a cabinet officer entrusted with the duty of conserving the public health.

THE ADMISSION OF WOMEN TO THE BRITISH MEDICAL ASSOCIATION.

As an index of a nation's rank as a civilized power, the position occupied or assigned to its women, is one from which very telling conclusions can be drawn. Fourteen years ago the British medical association decided that women were ineligible for membership within its sacred precincts. Now, largely owing to the initiative of its colonial branches, the association has rescinded the clause providing that "no female shall be eligible for election as a member of the association." It is to be hoped that the association will experience the same good results from the admission of women as have the institutions of other civilized countries. The absurdity of excluding them from the association after admit-

ting them to the medical profession was too apparent, even for the old fogies, who yielded to the inevitable with a show of magnanimity, which in view of their former prejudices, must have appeared somewhat droll to the observant critic of the times.

THE ORIGIN OF PLEASURE AND PAIN.

A NEW theory of pleasure and pain is advanced by Dr. Herbert Nichols in the *Philosophical Review*. The writer maintains that pleasure and pain are separate phenomena, and that there are different sets of nerves for the transmission of the two orders of impressions. These nerves are to be found in the sheaths of the motor and sensory nerves. The writer quotes Goldscheider as authority for having demonstrated the existence of specific pain nerves.

DREAMS.

DR. RICHARDSON, in the *Asclepiad*, comments on the subject of dreams. Dreams, he considers, to be all explainable on physical grounds. We make dreams as we make our lives, and they are the reflex of that which goes on in our organism. Absence of dream in sleep is a sign of sound health, physically and morally. The dreams of childhood almost always indicate deranged health. If subjective they indicate body derangement, if objective that some injurious food is being supplied the developing mind. A night of dream is a sure sign of mental overstrain.

MEDICAL NEWS.

AN international pharmacopœia is being advocated.

"BOIL your ice" is one of the aphorisms *à propos* of the cholera.

THE czar's physician, Dr. Obermueller, aged fifty-five years, is dead.

THE third congress of tuberculosis will be held at Paris, in July, 1893.

DENNIS D. REDMOND, F. R. C. S. I., an eminent Dublin practitioner, is dead.

DR. W. C. SPENCER, late of Howell, died at Denver, of pulmonary consumption.

THE second congress of Cuban physicians will be held in Havana, in October of the present year.

DR. RUDOLPH VIRCHOW has been chosen as the new rector magnificus of the university of Berlin.

PROFESSOR JOHN MARSHALL is the new dean of the medical department of the university of Pennsylvania.

GERMAN medical journals urge the compulsory cremation of the bodies of those who have died of cholera.

DR. E. B. SMITH has resigned the chair of minor surgery in the Michigan college of medicine and surgery.

THE normal pulse-rate of Napoleon Bonaparte is said by Corvisart to have been under forty beats per minute.

IT is estimated that there are about ten thousand homeopaths in the United States. They are represented by eighteen colleges and thirty medical journals.

THE *Ontario Medical Journal* is a new medical monthly published in Toronto and edited by Dr. Orr, of that city.

THE southern surgical and gynecological association will meet in Louisville, Kentucky, on November 15, 16, and 17.

THE Hering college of homeopathy is the name of a new school which will begin operations in Chicago this month.

DR. WALTER COLE, president of the Saint Louis medical society, recently committed suicide because of ill health.

HAVING reached the age limit, Sir Joseph Lister will be retired from the teaching staff of King's college next year.

THE seventy-ninth annual meeting of the Vermont state medical society will be held at Montpelier, October 13 and 14.

DR. L. S. MCMURTY, of Louisville, Kentucky, has been elected an honorary member of the British gynecological society.

THE senior editor of the *North Carolina Medical Journal*, Dr. Thomas F. Wood, recently died at Wilmington, that state.

BOSTON will have a new lunatic hospital, two hundred thousand dollars having been appropriated by the city authorities for that purpose.

THE CURE OF MYXŒDEMA.—Dr. Beatty, of Dublin, has reported a case of myxœdema cured by injections of thyroid juice from a sheep.

THE university at Dublin has conferred the honorary degree of doctor of medicine upon Dr. John S. Billings, of the United States army.

DR. E. O. SHAKESPEARE has been appointed physician to the port of Philadelphia, to succeed Dr. Henry Leffmann, who recently resigned.

SEMMELWEISS, who in 1847, recognized the infectious character of puerperal fever, is likely to have an international memorial established in his honor.

AN EASTERN OXYTOCIC.—Among the Kirghiz tribes when a woman is in distocia they seat her on a horse and give her a two-mile gallop over the plains.

THE CONTAGION THROUGH FLIES.—Flies have some disgusting habits which make it desirable they should be excluded from the house as far as possible, during epidemics.

DR. L. S. MCMURTY, of Louisville, Kentucky, was unanimously chosen president of the American association of obstetricians and gynecologists at its late meeting in Saint Louis.

DR. WM. H. SYLVESTER has been appointed superintendent of the insane department of Brooklyn. He has had a large experience in the treatment of insanity in numerous asylums.

DR. PETER BRYCE, superintendent of the Alabama insane hospital, at Tuscaloosa, recently died of Bright's disease. In 1861 he was elected to establish the institution he presided over at the time of his demise. The proficiency he displayed in his chosen specialty was recognized wherever his acquaintance extended. In his death the American neurological association lost its president.

A SAN FRANCISCO physician has advanced the theory that the blood rotates on its axis while circulating through the arteries just as the earth rotates on its axis while moving through space.

THE surgeons of the Pennsylvania railway will meet in Fort Wayne, Indiana, in October. The surgeons of the Wabash railway will hold their annual meeting in Danville, Illinois, in November.

DR. ENOCH CHASE, the first physician to settle in Milwaukee, died in that city recently at the age of eighty-three years. He settled on the city site fifty-seven years ago, and the city grew up with him.

THE new Russian pharmacopœia recently appeared. Three hundred old articles have been discarded, and one hundred new ones added, so that the total number now officially recognized is eight hundred and eight.

HOT-WATER fountains, on the penny-in-the-slot principle, are being established for the benefit of the working people in Paris. Ten litres of water heated by a "geyser," at a temperature of 60° centigrade, may be had for a penny.

THE BRITISH MEDICAL ASSOCIATION.—At the annual dinner at Nottingham, the council announced that two hundred and fifty thousand dollars or three hundred thousand dollars would be set aside for the erection of a permanent home for the association.

LYSOL AS AN ANTISEPTIC.—The sanitary board of Austria draws special attention to lysol as an antiseptic. It is speedily destructive of the comma bacillus. A solution renders the skin smooth instead of rough, an obvious advantage over sundry other disinfectants.

CHARLES E. SAJOUS, editor of the *Universal Medical Sciences*, has arranged to spend three years in Europe, and during his sojourn the *Annual* will be reproduced in the French language, thus insuring a more extensive circulation for this valuable work on the continent.

FIRST SIGN OF THE MENOPAUSE.—Naphey says the first sign of the menopause is an accumulation of fat forming two distinct prominences at the lower part of the neck on a level with the two lower cervical vertebræ. He considers this an infallible index of the period of a woman's life.

CÆSAREAN SECTION.—Dr. J. H. Carstens, has performed another Cæsarean section by the Porro method. Both mother and child were, at last accounts, doing well. This is the second case which has fallen to Dr. Carstens during the past year. Surgeon and patient are alike to be congratulated.

SURGEON AND MEDICAL DIRECTOR.—Dr. A. R. Brown Horner, of the United States navy, recently died at Warrenton, Virginia, aged eighty-eight years. He was the oldest medical officer in the navy, with the relative rank of commodore, and had served sixty-five years and six months in this department.

CONCERNING the election of Dr. Hunter McGuire to the presidency of the American medical association, the London *Medical Press and Circular* has this to say: "No man more deserves the honor than the emeritus professor of Virginia, to whom it comes unsought, and as the completion of all the honors his professional brethren could give."

THE American dermatological association elected the following officers at its recent meeting in New London, Connecticut: President, Dr. Geo. H. Fox, of New York; vice-president, Dr. H. W. Stelwagon, of Philadelphia; secretary and treasurer, Geo. T. Jackson, of New York; member-at-large of the council, Dr. J. C. White, of Boston. The next meeting will be held in Milwaukee in September, 1893.

THE World's Fair commissioners have contracted with the Waukesha hygeia mineral springs company to supply water from their springs at Waukesha, Wisconsin, to, and through the World's Fair grounds during the continuance of the Fair. This will involve the construction of a glass lined conduit one hundred and four miles in length, and is an assurance that visitors to the Fair will have pure drinking water.

THE Canadian medical association held its twenty-fifth annual meeting at Ottawa, September 21, 22, and 23, under the presidency of Dr. John L. Bray, of Chatham. Dr. Donald Maclean, of Detroit, delivered the address in surgery, and received an ovation from the profession of the dominion unexampled in warmth and enthusiasm. An abstract of the address will appear in the next number of The Physician and Surgeon.

THE New York cancer hospital has established a post-graduate course for nurses. It consists of one year's nursing in the surgical wards of the hospital, including a course of lectures by the attending staff and superintendent. Nurses in good standing who have graduated from small hospitals may enter any time, and at the conclusion of their term of service a certificate will be given them, provided their work has been satisfactory.

DURING the meeting of the American public health association, which will be held in the City of Mexico, commencing November 29, an opportunity is offered physicians and their families to visit that city at a one-fare rate for the round trip. From Boston a round-trip ticket will cost eighty-five dollars, from Chicago seventy-five dollars, and from New Orleans fifty dollars. Many members of the profession have signified their intention to be present at the meeting with their families.

IN 1853 cholera destroyed sixteen thousand persons in England, one hundred and fourteen thousand in France, twelve thousand in Messina, and eleven thousand in the Persian city of Teheran. The following year the scourge cost New York two thousand lives in addition to the five thousand who were laid low during the epidemic of 1848-9. It was scattered along the usual channels, and Philadelphia lost five hundred, Montreal thirteen hundred, and Detroit one thousand.

NEW HAMPSHIRE has a clause in its divorce law rendering it possible to obtain a decree on the plea of treatment seriously injuring health or endangering reason. A husband recently complained to the court that his wife had become a believer in Christian science, and practiced as a faith-curess. He claimed as a result of this conduct, despondency and moroseness on his part, and produced medical testimony to show that if this condition were allowed to progress his mental and physical health would become imperilled. The judge immediately granted a divorce.

MR. JOSEPH HUTCHINSON, at the last annual meeting of the British medical association, proposed a resolution on vivisection, which was unanimously adopted as follows: "That this general meeting of the British medical association records its opinion that the results of experiments on living animals have been of inestimable service to man and to the lower animals, and that the continuance and extension of such investigations are essential to the progress of knowledge, to the relief of suffering, and the saving of life."

DETROIT ACADEMY OF MEDICINE.—The twenty-third annual meeting was held September 13. Dr. Geo. C. Palmer, of Flint, read a very interesting paper regarding the management of state institutions, advocating the asylum treatment of the insane, and urging the utilization of the clinical material in the asylums for scientific purposes. Dr. Manton, the retiring president, read an able address, dealing for the most part with septic complications of the puerperium. The following were elected to office for the ensuing year: President, Dr. W. J. Wilson; vice-president, Dr. W. J. Cree; secretary, Dr. W. E. Clark; treasurer, Dr. R. J. Kelly. Dr. Manton entertained the members with a collation.

THE PAN-AMERICAN CONGRESS.—The committee on organization of the Pan-American medical congress will issue the preliminary announcement of the congress within a few weeks. This announcement of the congress will show that the organization has been perfected in almost every colony and country of the western hemisphere. The local medical societies in each of the constituent countries are made auxiliary to the congress, which will be held in Washington, District of Columbia, September 5, 6, 7, and 8, 1893. Dr. Reed, of Cincinnati, secretary-general of the congress and chairman of the committee on organization, announces that after extended correspondence between himself and Dr. Maragliano, of Genoa, general-secretary of the international congress, the date of the Rome meeting has been finally and definitely set for September 24, of next year. This gives an interval of sixteen days between the Washington and Rome meetings, during which time an easy trip can be made from the former to the latter city. It is possible that a steamer may be chartered direct from New York to Rome.

THE Mississippi Valley medical association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday, and Friday, October 12, 13, and 14, 1892. The program is a valuable one, containing many of the most prominent names in the profession our country affords. It covers every department in medicine. The attendance will be unusually large, as Cincinnati is the centre of population of the United States. Not only the scientific, but also the social part of the meeting will be of the highest order. The interest of the convention will be augmented by the meeting of the gentlemen interested in the Pan-American medical congress, also other bodies of medical men. Dr. Benjamin Ward Richardson has written his earnest hope of being present. The association will be just in time and just in line for many of the gentlemen en route for the American public health association in the city of Mexico. Among the many prominent gentlemen who are expected to read are the following: Dr. Hunter McGuire, Richmond, Virginia, president of the American medical association, the address on surgery; Dr. Hobart Amory Hare, professor of materia medica in Jefferson medical college, Philadelphia, the address on medicine.

In the suit brought against the New York hospital for fifty thousand dollars, the plaintiff, Alexander Coblitz, who instigated proceedings for the loss of a leg, was beaten on the ground that the institution, being a charitable one, was not liable in such cases, provided the physicians were selected with discretion. It is claimed by the plaintiff that the hospital agreed to take pay for the treatment he received, and consequently cannot claim immunity because of the nature of the institution. On this ground the case will be appealed to the higher courts. The individual surgeons have also been sued.

Concerning London Hospitals.—There are nineteen general hospitals in London. Eleven of them have medical schools attached, and three, Saint Bartholomew's, Saint Thomas's, and Guy's are endowed. The first of these is the wealthiest and most ancient, having been founded in 1122. Its net revenue in 1889 was three hundred and fifty thousand dollars. It owns houses in London and has also about thirteen thousands acres of land in various counties. Saint Thomas's was founded in 1207, and has a revenue of about two hundred and twenty thousand dollars. Guy's has a revenue of about one hundred and thirty thousand dollars. The London hospital in Whitechapel Road, with accommodations for seven hundred and seventy-six patients, is the largest in the metropolis. It treats annually also about one hundred thousand out-patients, besides trivial cases not registered. The total number of beds in the general and special hospitals in London is eight thousand five hundred, of which six thousand five hundred are in constant use. The poor-law infirmaries and the sick wards of the workhouses furnish fourteen thousand beds, and the metropolitan asylum board has three thousand five hundred for infectious cases, the average number in use being less than one thousand.

Medical Expert Testimony.—The Minnesota state medical society proposes the following as a law to regulate medical experts: Section 1.—In all cases pending in the courts of this state, civil and criminal, before or at the time of said cases, the judge of said court, when it is made to appear to him that the appointment of expert upon medical, scientific, or mechanical questions is desirable, may appoint such experts to examine into the subject matter in controversy, said experts so appointed to be selected in reference to their impartiality between the contending parties; the number of such experts in each case to be fixed by the court. Section 2.—In all cases where experts are so appointed, the court is to fix their compensation, and in all criminal cases direct the payment of the same in the same manner as witnesses on the part of the state are paid; in all civil cases the amount so fixed and determined by the court shall be taxed as disbursements by the successful party. Section 3.—The court may order such experts to examine into any medical, scientific, or mechanical question, and after such examination to testify in court in reference thereto. Section 4.—The testimony of said experts so appointed by the court shall be prima facie evidence of the statements and conclusions as to the questions in reference to which said testimony has been given. Section 5.—The court may also fix and determine the amount to be allowed such experts for and on account of any medical, scientific, or mechanical examination, analysis or test, which the court may deem advisable to have made and direct the payment thereof, or permit the taxation thereof, as costs, as hereinbefore provided.

RECENT PUBLICATIONS.

REVIEWS.

BOOK ON THE PHYSICIAN HIMSELF, AND THINGS THAT CONCERN HIS REPUTATION AND SUCCESS.*

DR. CATHELL'S book on the physician himself has now passed into its tenth edition. This is sufficient evidence of its popularity. For good advice, wise counsel, and sound sense, the book is perhaps without a peer. Every young physician should read it, and every old physician should have digested its manifold precepts.

We know of no book that quite fills the place occupied by Dr. Cathell's book, and fulfilling as it thus does so unique a purpose, there is little doubt that the tenth edition will be as rapidly dispersed among the profession, as its predecessors.

* By D. W. Cathell, M. D. New tenth edition (author's last revision). Thoroughly revised, enlarged, and rewritten. In one handsome royal octavo volume. Three hundred and forty-eight pages. Bound in extra cloth. Price, post-paid, $2.00, net. Philadelphia, the F. A. Davis Company, publishers, 1231 Filbert street.

THE PRINCIPLES AND PRACTICE OF BANDAGING.*

THIS is probably as complete a manual of bandaging as was ever sent forth from the medical press. It contains a descriptive text which is lucidly written, and is profusely illustrated with every conceivable form of dressing. Bandaging is apt to be too empirical in its application, and the author insists that good results in surgery depend considerably on the attention and skill devoted to these manipulative procedures. As an aid to the application of correct and comfortable dressings nothing more desirable can be conceived than the present manual. It is indispensable to the teacher of minor surgery.

* By Gwylyn G. Davis, M. D., assistant demonstrator of surgery, university of Pennsylvania, etc. Cloth. Price, $3.00. Geo. S. Davis, Detroit.

A MANUAL OF CHEMISTRY.*

AMONG the manuals of chemistry that bid for the students' patronage Dr. Luff's will probably be as successful as any in securing recognition. The book is written with a view of bringing together in a concise form those portions of chemical science that directly or indirectly bear on the study and practice of medicine. It is essentially a manual for medical students, and fulfills its object in every way.

* For the use of students of medicine. By Arthur P. Luff, M. D., B. Sc., lecturer on medical jurisprudence and toxicological chemistry, Saint Mary's hospital medical school, London. In one 12mo volume of five hundred and twenty-two pages, with thirty-six engravings. Cloth, $2.00. Philadelphia, Lea Brothers & Company, 1892.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY, 1892.

THE transactions of the Michigan state medical society have increased in bulk and importance during the past year. They now present a handsomely bound volume, and are printed on excellent paper. The contents are such as the members make them. The tone and character of the papers is higher than in any preceding year and testify to the good work the society is accomplishing. The discussions seem faithfully reported, even to the preservation of the vernacular, which is sometimes more expressive than elegant. The editor is to be congratulated upon the handsome volume he has issued.

THE STUDENT'S HANDBOOK OF SURGICAL OPERATIONS.*

THIS book is an abridgement of the author's well-known manual of Operative Surgery. It concerns itself with the most essential and most commonly performed operations. It is needless to say that every page exhibits the author's attractive and lucid power of description. The present volume is admirably adapted to the busy student, or to one preparing for examinations. All anatomical descriptions are omitted, and statistics of mortality and results are also left out. The information imparted in these pages on surgical subjects is therefore given in concentrated form. The book will doubtless find the ready sale it so richly deserves among medical students and practitioners.

* By Frederick Treves, F. R. C. S., surgeon and lecturer on anatomy at the London hospital. In one square 12mo volume of five hundred and eight pages, with ninety-four illustrations. Cloth, $2.50. Philadelphia, Lea Brothers & Company, 1892.

THE DISEASES OF THE STOMACH.*

THE name of Ewald is an adequate guarantee of the thoroughness of the work before us. The learned and scholarly Berlin professor is already well known to the English reading public by a previous translation of the first volume of his "Klinik der Verdanungs krankheiten." The lectures comprised in the present volume are based on stenographic reports of Professor Ewald's postgraduate, or practitioners' course. They review very carefully the various pathologic states to which the stomach is subject. The three chapters dealing with the gastric neuroses are preceded by a description of the innervation of the stomach by Richard Ewald, the author's brother. These chapters are among the most interesting in the book. Not only the sensory and motor derangements are included under these heads, but also conditions of hyperacidity and hypersecretion.

The translation has been well done, and the lecture can be smoothly and easily read. They will, it is hoped, receive the attention from scientific men they so richly deserve. The ailments of the stomach concern us all, and this scholarly and learned contribution to our understanding of these ailments should be read by every specialist as readily as by the general practitioner.

* By Dr. C. A. Ewald, extraordinary professor of medicine at the university of Berlin, etc. Authorized translation from the second German edition with special additions by the author by Morris Manges, A. M., M. D., attending physician to out-door department, Mount Sinai hospital, New York City. Four hundred and ninety-seven pages. Price: cloth, $5.00; sheep, $6.00. D. Appleton & Company, New York.

THE ESSENTIALS OF HISTOLOGY.*

THE third edition of Professor Schäfer's histology has just been issued by Messrs. Lea Brothers. It is an excellent text-book, and one of the best descriptive and practical guides to the microscopical examination of organic tissues. Many new methods will be found mentioned, especially in the department dealing with the examination of nervous tissues. Students will find in this manual all they will desire in a text-book—a complete description in a short compass.

* By Edward A. Schäfer, F. R. S., Fodrell professor of physiology in university college, London. New (third) edition. In one octavo volume of three hundred and eleven pages, with three hundred and twenty-five illustrations. Cloth, $3.00. Philadelphia: Lea Brothers & Company, 1892.

DISEASES OF WOMEN.*

THE large number of gynecological treatises that invite the patronage of the student or practitioner is somewhat bewildering. Dr. Davenport's book, however, is somewhat unlike the rest of its kind. It is a non-surgical treatise, and has two main objects,—to impart to the student the elementary principles of the method of examination and the simple forms of treatment of the most common diseases of the pelvic organs, and to assist the practitioner in understanding and treating the cases he meets with in every-day practice. The work has already passed into a second edition, and the concise and lucid style of the author, and his very thorough manner of treating his subject, will doubtless continue to make his work one of the most popular of its kind.

*A manual of non-surgical gynecology, designed especially for the use of students and general practitioners. By F. H. Davenport, M. D., instructor in gynecology, Harvard medical school. Second edition, revised and enlarged. Duodecimo: three hundred and fourteen pages; one hundred and seven illustrations. Cloth, $1.75. Philadelphia: Lea Brothers & Company, 1892.

REFERENCES.

BOOKS AND PAMPHLETS.

"Two Cases in Abdominal Surgery." By Eugene Boise, M. D., Grand Rapids. Reprinted from *New York Journal of Obstetrics and Gynecology.*

"Colpo-Perineorrhaphy." By Edward W. Jenks, M. D., Detroit. Reprinted from *Journal of American Medical Association.*

"Two Cases of Carcinoma of the Uterus." By J. T. Jelks, M. D., Hot Springs, Arkansas. Reprinted from the *Journal of the State Medical Society of Arkansas.*

"Bulletin of the Harvard Medical School Association." Boston: Published by the association.

"Some Effects of Blennorrhœa in Women." By James T. Jelks, M. D., Hot Springs, Arkansas. Reprinted from *American Gynecological Journal.*

"Report of Eighty Operations Performed before the Medical Class of the College Hospital during the Regular Session of 1891–2." By J. S. Wight, M. D. Reprinted from the *Brooklyn Medical Journal.*

"The Operative Treatment of Goitre." By J. C. Warren, M. D. Reprinted from *Boston Medical and Surgical Journal.*

"The Lacerated Cervix." By W. G. Bogart, M. D., Chattanooga.

"Evolution from a Scientific Stand-point." By John Pope Stewart, M. D., of Attalla, Alabama.

"An Epitomized Review of the Principles and Practice of Maritime Sanitation." By Joseph Holt, M. D.

"Rupture of Aortic Valves, with Demonstration of Specimens. Aneurism of Right Auricular Appendix." By Ludwig Hektoen, M. D., Chicago. Reprinted from *North American Practitioner.*

MEDICAL PROGRESS.

MEDICINE.

POST-FEBRILE INSANITY.

Dr. Henry M. Hurd read a paper on this subject at the recent annual meeting of the medical and chirurgical faculty of Maryland. The *Maryland Medical Journal* for May 28 contains the full paper, in which the author mentions the recorded cases, from Chomel's, in 1834, to the present time, and reports three cases observed by himself and Dr. Thayer at the Johns Hopkins hospital. Of the three new cases, one was a case of melancholic insanity coming on during convalescence after typhoid fever; the second was one of insanity developing from pneumonia, with systematized delusions originating in the delirium of fever; and the third was one of maniacal excitement following the removal of two diseased ovaries. In this last case there was incoherence lasting several months, after which complete recovery took place. The second case—not a hospital case—was characterized by hallucinations, and delusions affecting the patient's husband; she believed that he and the female nurse had improper relations in her presence, and her embitterness against him became so extreme that she was placed in an asylum. After a year of confusion and delusions recovery set in, and she was restored to perfect mental balance.

Dr. Hurd offers the following suggestion as to an improved classification of post-febrile mental disorder: (1) Cases of insanity following shock. (2) Those developing from diseases due to specific poisons—such as puerperal fever, pneumonia, uræmia, and the exanthemata. (3) Those originating from nervous exhaustion and anæmia. In this group will be found those insanities, secondary to fever, that are an expression of an exhausted physical state; they take the form of delusions of apprehension and fear, hallucinations of sight and hearing, and perversions of taste and tactile sensibility, at times going on to stupidity and mental impairment.

Out of twenty-three cases that have been adequately reported, eleven were of typhoid origin. In four of these delirium was present during the attack; in seven, after it. Eight patients recovered, two died, and one remained insane. The pneumonic cases were two in number, one occurring during the pyrexia and the other after it. Both patients recovered after a tedious convalescence. Nine

of the twenty-three cases were subsequent to surgical operations, and the mental trouble came on at about the ninth day in several of them. In four cases there was excitement, in five there was depression; four patients recovered, four died, and one remained insane.

The author attaches no small importance to the treatment of typhoid fever with cold baths, and considers that it is one of the notable features of that method that so few of the patients develop acute head symptoms. Another suggestion offered by Dr. Hurd is that the patient after febrile disease is very frequently insufficiently fed—with perhaps at the same time insufficient quiet, too many friends or "callers," and a premature sitting-up—and the prolonged abstention from food becomes the determining factor of mental impairment. The term "post-febrile insanity" should, in the author's opinion, be restricted to cases that follow upon exhausting attacks of fever or upon operations and the like, and should not embrace the prolonged delirium that is engendered by toxic conditions.—*New York Medical Journal.*

DANGERS OF LAVAGE OF THE STOMACH.

In the *Practitioner* of April, 1892, Soltan Fenwick, of London, discusses the question of lavage. He points out that attacks of convulsions and tetany have sometimes followed resort to this measure, and also that a number of cases are on record in which syncope and sudden death followed it. He also reports instances in which perforation of the stomach took place, and he has also known gastric hemorrhage to occur.

Besides the other injuries which may follow lavage, he points out that there are other cases on record in which antiseptic materials have been used for washing the stomach, and that as a result death has occurred in this way. This fatality has followed the use of a two per cent. solution of boric acid. The conclusions which he draws are as follows:

At the present day every imaginable symptom that can in any way be connected with the digestive organs is immediately considered as an indication for the use of lavage, and we find that not only are chlorosis, atonic dyspepsia, and the gastric crises of ataxia subjected to this treatment, but even cases of reflex vomiting are supposed by some to necessitate the employment of the douche. But it is obvious that in those cases where the treatment fails to do good, it is extremely likely to do harm, since, as Leube pointed out, it has the effect of removing those products of digestion whose manufacture has caused the stomach a considerable amount of labor. For his part he fails to understand how washing out the organ in a case where the normal amount of secretion proves insufficient can possibly increase its digestive powers, or the lavage of the stomach prevent the occurrence of symptoms which are wholly dependent on organic disease in another organ remotely situated. In one case of tabes dorsalis, accompanied by exceedingly severe gastric crises, he washed out the stomach every day for some weeks, and the state of digestion was carefully watched; but beyond the fact that the symptoms of the disease grew steadily worse, he could detect no material alteration in the condition of the patient. In like manner the few cases of atonic dyspepsia and chlorosis which he has treated by lavage,

have, without exception, proved exceedingly rebellious, and only improved when subjected to the more ordinary course of medical treatment. Fenwick would, therefore, conclude that, although lavage is an invaluable remedy in certain cases of gastric disease, its indiscriminate employment in every case of disorder of digestion will prove a curse rather than a benefit, and will eventually throw discredit upon the whole method of treatment.—*Therapeutic Gazette.*

WILL THE GENERAL PRACTITIONER CEASE TO EXIST, AND HIS PLACE BE TAKEN BY SPECIALISTS?

In language written and spoken, we are forcibly informed that this is an age of progress; that old things must give way to new; and that the relentless scythe of Time will hew down everything unsuited to this advanced and advancing age.

Among the many early doomed to extinction, according to some writers and teachers, is a class endeared to all through the memory of by-gone days—the general practitioner, the family physician. We are told that he must go, and his place be filled by the specialist.

Some kindly describe him to us. He is always short, very stout, a little past middle life, and wears spectacles. His resources to battle with disease, generally speaking, consist of bleeding, blisters, quinine, and calomel, with an occasional dose of salts. The humorous journals assist in diffusing a knowledge of him.

If this description is a correct one as at present he exists, then, indeed, he must go, for he is no longer suited to his environment; but, as a matter of fact, the good natured old doctor here described has long since almost disappeared. Like the partridge of Pennsylvania, he exists only in small numbers, in the mountain districts; but his improved type—the practitioner of to-day—holds his place by merit, in this and in every other civilized land, and is here to stay.

Year by year the study of medicine covers a wider field, until now no mind is broad enough, or working life long enough, to enable one to become an expert in all its branches. But, as an army needs a general to guide and direct it; to be thoroughly conversant with the art of war, in all its details; capable of knowing and selecting a good engineer, artillery officer, commissary general, or corps-commander, and assigning the right man to the right place;—so in our battle with the enemy—disease—we need a commander to guide and direct: a man with a broad knowledge of general medicine, and thoroughly posted, by bedside experience, in all its branches. There are plenty of such men, and the wise patient will seek the advice of such first, and, if a specialist is needed, will depend upon the family physician to make the selection.

If my judgment—gained by a somewhat large experience—is correct, the majority of cases, as they come to us, can be best treated by the general practitioner; the minority alone can with advantage be assigned to the specialist.

Most diseases have complications. The patient depressed by a uterine catarrh may, as a result of indiscreet exposure, develop a solidified lung. A pelvic inflammation, as in a case I recently saw, may be but a complication of typhoid fever. Here, a single visit from the specialist is all that is probably necessary. The case will be best managed by the general practitioner.

The advertising quack will not agree with me. His advice is: "Shun the

family doctor; come to a specialist—me." How many poor invalids would have saved time, money, and health by having come to the physician first, to have been guided by his counsel. The general public, even when educated, is alone utterly unable to make a proper selection; and, as a matter of fact, the office of the quack is filled with lawyers, clergymen, and men who know everything except medicine.

Our first-class medical colleges graduate yearly hundreds of young men and send them forth thoroughly prepared in all departments of medicine and lacking only experience to enable them to become first-class general practitioners; but, alas, the educated man too often shrinks from physical toil, and the young physician is not attracted to general practice, with its long hours of labor and sacrifice of social pleasures.

The brilliant results recently accomplished in some departments of medicine, notably in gynecology, with the large fees and shorter hours of work naturally attract the young graduate. So great is this tendency that what would ordinarily be for the good and the development of the profession has degenerated into an evil; the specialties more than general practice are becoming overstocked.

No man should embark in a specialty until he has practiced medicine for five or six years. He should learn by experience not what branch he likes, but that which he is best adapted to.

I recently heard a teacher say to a mother: "Your son is bright, studies easily, and is industrious, but cannot use his hands." Such a boy might in after-years be successful in the treatment of nervous diseases, but what a failure he would make as a surgeon.

In regard to the gynecologists, I have always thought that their ranks should be filled, not by general practitioners, but by young surgeons—young men thoroughly grounded in the theory and practice of general surgery.

A man of moderate ability, industrious, and conscientious, may lead a useful life as a general practitioner, and will be fairly remunerated for his services; but a specialist with only moderate ability in his branch will be a gloomy failure.—John Graham, M. D., in *Medical News*.

THE ETIOLOGY OF TYPHOID FEVER.

Is typhoid fever a specific disease due to the action of a specific agent? or is it, as Murchison always maintained, non-specific in its nature, traceable not to any one agent but to a peculiar decomposition, liable under certain circumstances to be set up in the stools of both healthy and typhoid patients alike, although especially prone to occur in the stools of typhoid patients? The question has been much debated, and many cases have been recorded in support of both contentions. At one time it seemed that, notwithstanding the support given to the latter view by such eminent authorities as Dr. Murchison and Sir William Jenner, the balance of evidence adducible was against their view being the correct one, and strongly in favor of the essentially specific nature of the disease.

The question has been touched upon by Sir Charles Cameron, in his suggestive address published in another column, and it must be admitted that recent work in the domain of bacteriology has served to revive in part the interest in

this question, since it indicates that under certain circumstances all the characters, morphological and biological, of the organism regarded as peculiar to typhoid fever may be assumed by one of the commoner organisms present in healthy stools. The whole subject has recently received careful and exhaustive attention in a valuable monograph by Dr. Gabriel Vallet.

The history of the subject forms an interesting chapter in the records of bacteriological discovery. Down to 1880 a number of organisms had been described as occurring in typhoid fever, but it was not till then that one was singled out by Eberth as the true pacific organism of the disease. Four years later appeared Gaffky's work describing fully the now well-known characters of this bacillus, called after its discoverer, "Eberth's bacillus." Since then numerous observations have been made, and this organism has been found numberless times both in the stools and in the organs and tissues of typhoid patients. Amongst its other properties, that of exciting suppuration has been fully recognized. That this organism was the agent of typhoid fever appeared for a time to be thus firmly established.

Doubt was first cast on this view by Rodet and Roux in 1889. These observers claimed that the specific organism was another and much commoner microbe —one constantly present in healthy stools—the bacillus coli communis. This organism had first been described by Escherich in 1885, who regarded it merely as a saprophyte, very polymorphic, and very abundant in fæces, without attaching to it any pathogenic property. It was Hueppe who first, two years later (1887), ascribed to it such a property. This observer was struck by its great abundance in the stools of a case of cholera nostras, and he came to the conclusion that under the influence of some disturbing cause the organism had acquired virulent properties. He recognized its great resemblance to Eberth's bacillus, but it was Rodet and Roux who first drew attention to the possible relation between this organism and typhoid infection. In a case of typhoid fever they had found a localized peritonitis, the pus of which contained the bacillus coli as its only organism. In another case of typhoid fever they found multiple abscesses in the liver also containing this organism. And, lastly, in an epidemic of this disease they could not, on repeated examination, find Eberth's bacillus in the stools; they found instead the bacillus coli in large quantity, and almost in pure cultures.

As an explanation of these apparently irreconcilable facts, it is of course possible that the two organisms—Eberth's bacillus and the bacillus coli communis—are simply varieties of the same species, and that they are not specifically different. The morphological differences between the two organisms are admittedly slight. No single character can be ascribed to the one which is not found in the other; the most striking difference between the two is that the bacillus coli usually grows more luxuriantly on culture media than Eberth's bacillus. Other differences—morphological and cultural, capability of resisting temperature, etc.—have been described, but none of them are so constant as to be relied upon. Such being the case, it is not surprising that the view should be advanced, as has been done by Rodet and Roux, that the bacillus coli is the real typhogenic agent, while Eberth's bacillus, formerly so regarded, is merely this organism modified in its passage through the body. They found it possible, in two cases of typhoid fever, to demonstrate by puncture of the spleen the

presence of Eberth's bacillus in that organ at a time when the stools contained an almost pure culture of the bacillus coli, and no Eberth's bacilli.

The most recent work on the subject has followed along two lines. On the one hand its tendency has been to show that Eberth's bacillus is not so commonly or so constantly met with in the stools of typhoid patients, or in water contaminated therewith, as has hitherto been supposed. A number of observers —Rodet and Roux, Vallet, and others—have examined the stools in different stages of the disease in a number of cases; and have found only the bacillus coli without Eberth's bacillus. In fact it would appear that Eberth's bacillus is not infrequently absent from the stools of typhoid patients. When present at all it has usually been between the tenth and twentieth day of the disease, at a time, namely, when Peyer's patches have commenced to ulcerate, and when sufficient time has elapsed to allow the bacillus coli to undergo the same modifications within these patches as on the view above noted it is assumed to undergo in the spleen in being modified into Eberth's bacillus. On the other hand, it has become more and more probable that the bacillus coli communis is capable, under certain circumstances, of acquiring definite pathogenic properties in man. Its presence has now been demonstrated especially in a large number of suppurative lesions—abscesses, pleurisies, peritonitis, and the like, as well as in dysenteric conditions, cholera nostras, etc.

The question with which we started as to the specific or non-specific nature of typhoid infection has thus in the hands of the bacteriologists resolved itself into a question as to the identity or non-identity of two organisms possessing slight differences of character, one of them (bacillus coli communis) constantly present in fæces, the other (Eberth's bacillus) only found, and then not always, in cases of typhoid fever. Anything which would support the view that the bacillus coli was the chief agent would naturally lend support to the older view so strongly held by Murchison; and conversely, any facts pointing to the non-identity of the two organisms, and especially to the special pathogenic properties of Eberth's bacillus as distinguished from the bacillus coli, would tend to weaken the position taken up by Murchison, while, at the same time, it would be more in consonance with the character of the evidence that has steadily accumulated regarding the essentially specific nature of this infection.

Up to the present it cannot be said that the bacteriological evidence either way is conclusive. It suffices to say that the results recorded by Vallet appear to show that the two bacilli brought into antagonism with each other as rival claimants for the honor of being regarded as the chief pathogenic agents in typhoid fever differ very little in their morphological or other characters, and are indeed very variable in these respects. Their pathogenic properties, when tested on animals are identical. The bacillus coli is to be found in a thriving condition in cesspools, and thrives well when grown in the fluids of such cesspools previously rendered sterile by filtration; while Eberth's bacillus does not grow under such circumstances, and soon dies. The bacillus coli withdrawn from closets is more virulent than that isolated from healthy human intestine, and much more virulent than Eberth's bacillus. In passing through the animal organism it appears to undergo certain modifications by which it approaches more and more in its characters to the bacillus of Eberth.

Lastly, on consideration both of the clinical and the experimental facts, it

would almost appear as if the bacillus coli shared with Eberth's bacillus the power of producing typhoid fever. Always present in the intestine, it can become typhogenic under certain circumstances, and its sojourn in cesspools and closets appears to be one of the chief conditions that determine this change in its character. It is only within the human organism that it is capable of assuming the characters of Eberth's bacillus.—*British Medical Journal.*

SURGERY.

BONE-GRAFTING.

ALTHOUGH the practice of supplying defects in bone, by transplanting bone from the lower animals, is not new, it has never yet gained a general recognition by the profession. Not only are the methods of its performance still questions for debate, but its value and usefulness have been doubted. It has seemed to me that the whole subject of the transplantation and grafting of bone might be thoroughly investigated *de novo* with profit to the profession; but in this paper I shall attempt no more than to put on record two cases in which I have attempted to repair defects in human bone by grafting in fragments of living bone from one of the lower animals.

There are, as is well known, two radically different methods of using bone in plastic operations. In the one, dead bone rendered perfectly aseptic is implanted into the living; in the other, the living bone is used, in the hope that it will retain its life in its new quarters, and become adopted by the organism in which it is implanted. In the first instance, the dead bone can have no other properties than those pertaining to any aseptic foreign substance of like physical qualities. It may afford support by binding broken bones together; it may protect from injury by covering an otherwise exposed tissue, as in defects of the skull; or it may fill up a bone cavity with an aseptic absorbable material, in which granulations and blood-vessels may grow luxuriantly and develop rapidly into bone, serving thus as a scaffolding for the building of new tissue; but in no case where dead bone is used can its part be any other than that of a passive instrument. It may, indeed, irritate the neighboring structures and stimulate them to a more vigorous cellular proliferation, but it does so precisely in the same way as a bullet or any other foreign substance. All that is active in the process pertains to the living organism, which reacts with greater or less irritability to the touch of the strange material. The surgeons who of late have devoted the most attention to the implantation of dead bony substances in the living organism are Thomas Glück, of Berlin, and Nicholas Senn, of Chicago. The methods of the two surgeons, however, are very dissimilar. Glück has sought to supply organic defects in bones and joints by replacing the missing parts with large masses of inert aseptic substances, such as ivory. Ivory pencils were driven into the long bones to bind them together, and ivory joints were fitted into resected knees, and the skin made to heal over them, in the hope of thus preserving the motion of the articulation. The immediate effects of these operations were very encouraging, but their ultimate results were such that in every case, I believe, the foreign bodies had to be removed. Dead ivory will, indeed, heal in and become buried

in the organism, and if so placed as to bear no pressure, and be subject to no motion, may remain thus encysted for an indefinite length of time; but whenever it is made to press unduly on the adjacent tissues or to rub them, irritation is produced, which will inevitably lead to suppuration and ulceration.

Senn decalcifies bone, makes it aseptic, and imbeds it in either large or small pieces in aseptic bone cavities, and aims in this way to stimulate the growth of blood-vessels and granulations, and to afford them a support until they can be transformed into bone. During this process, the implanted material becomes absorbed. This method seems to have had some success in securing the rapid healing of bone cavities. It is to be remarked, however, of both these methods that other material could be substituted for the ivory or decalcified bone and produce the same results. Sponge, properly prepared, would be an excellent material for that kind of service.

In using living bone, the surgeon aims to introduce an active instead of a passive material into the living tissues. The attempt has been made by Dr. Phelps, of New York, to transplant a large piece of bone from a dog into the leg of a boy. The difficulties in the way of attaining success by this method are great. Large pieces of bone separated in the same way from the shaft, and permitted to remain *in situ*, would probably die in most cases in spite of all care,—much more so, of course, when, in addition to the injury done, the fragment is dislocated and subjected to the strain necessary to keep it in place in the limb of another animal. The difficulty, indeed, of keeping two animals fastened together in a plaster bandage aseptic, would in itself be a serious one, while that of keeping the limbs absolutely immovable would be almost insuperable.

While the failure of this method, hitherto, would not necessarily preclude its ultimate success, it is nevertheless impossible to be very hopeful of its future. It has seemed to me that the grafting of many minute fragments of living bone into bone cavities, or between the prongs of ununited bones, would promise much more. There is no good reason why small pieces of bone from the lower animals, nearest to man in structure, should not heal into the human organism and retain their vitality. Their minute size would enable them to get their nutriment by imbibition. Buried in the tissues and supported by them, they could easily be made immovable, and at the same time lie surrounded by and bathed in a serous effusion, and it is not too much to suppose that the bone-cells so placed might not only live but also grow and even multiply. Even though these vital powers should be retained in the most limited degree, the living fragments would, nevertheless, serve the purpose of stimulating repair better than we can think possible of the decalcified dead bone of Senn. Acting on this hypothesis, I have in two cases, one of ununited fracture with necrosis and loss of substance, and one of necrosis of the skull involving a large area, sought to supply the defect by grafting living rabbit bone, in minute fragments, into the human body.

Case I.—Alexander Schulte, aged seven years, was brought into Saint Mary's hospital on October 1, 1890, with the following history: He had fallen two weeks before, and broken his left leg at the upper part. A doctor, called in, diagnosticated a fracture of the tibia, and applied paper splints to the leg. The fracture does not seem to have been originally compound, but, either from neglect or from malnutrition, became the seat of a suppurative inflammation. I found, on examination, the tibia broken just below the line of the epiphysis, and pus dis-

charging freely from a sinus. I made a free incision, and found the bone necrosed and in loose pieces through nearly its whole thickness. When these were all removed there was a great loss of substance, and a large gap between the uppermost and lowermost fragments, which, to a very small extent, was occupied by two prongs of bone which projected, one from the upper fragment downward, and the other from the lower fragment upward, and overrode each other to the extent of about an inch. These prongs were covered with granulations and apparently healthy. The fibula was intact, and it was, therefore, impossible to join the fragments together without first dividing the companion bone. This I did not care to do, on account of the anæmic and bad general condition of the child. I contented myself for the present with rendering the wound as aseptic as possible, stuffed it with iodoform gauze, and applied a plaster bandage from the middle of the thigh to the foot. The wound was dressed through a window cut in the plaster, and from the beginning did well. The pain ceased. There was little or no further discharge of pus, and the child began, under the better care and more generous diet, to improve rapidly in his general health. Early in November the father insisted on removing the child to his home. Before permitting him to leave I removed the plaster and carefully examined the leg. The wound had healed with the exception of a narrow strip of granulations at the bottom. The probe could find no opening to the bone excepting at the lowermost corner of the cut, where the bone appeared for a short distance to be denuded of its periosteum. I was disappointed in finding absolutely no evidences of bony repair, which I had hoped might take place from the periosteum and the remaining prongs of which I have spoken. The leg was encased again in plaster, a window cut for dressing the wound, and directions given as to its care. The father was directed to bring him to the hospital for examination once a week, but nothing more was seen of him until January 1, 1891, when the child was brought in again, much worse in his general condition and with a spreading necrosis in the lower fragment. This involved the shaft below the prong, which remained healthy.

The old cut had healed, but I was obliged to make a new one from its lowermost point downward, and to remove some more dead and diseased bone on February 4, as there was no union whatever at the seat of fracture, and I tried to excite some action by rubbing the projecting prongs violently together. I ventured to do this, although the wound below made by the last operation had not quite healed, as it was evident that nature unaided would not be able to replace the lost bone. On February 18, as the situation was unchanged and as there was absolutely no bony repair whatever at the seat of fracture, I planted in some bone-grafts from a rabbit's tibia in the following manner: The boy was put under an anæsthetic, and an incision made about an inch in depth and three inches long between the two prongs of bone which projected, one from the upper and the other from the lower fragment. Before the hæmorrhage was entirely controlled, a healthy rabbit was killed, its tibia quickly extracted and denuded of all its soft coverings. The bone was then placed in a disinfected mortar and pounded until it was broken into minute fragments. These were then placed in the depth of the wound along its whole length and pressed firmly into the tissue. The flesh, rising above them on each side, held them in place and protected them from injury. They were thus in the most favorable condition for maintaining

their vitality. In contact with the living cells on both sides, and bathed in the nutritious exudate which always flows from a fresh cut, they could imbibe sufficient nutriment without the aid of blood-vessels. The wound was covered with iodoform gauze and the limb was again incased in plaster. The new wound did extremely well from the beginning. There was almost no discharge, and it was rarely necessary to change the dressings. On March 20, when I first removed the plaster, the wound was nearly healed, and I was pleased to find that there was more firmness at the seat of fracture and a beginning consolidation. Far below the wound, however, there was a sinus, discharging a small amount of pus and leading to a denuded spot in the shaft of the bone. This sinus was opened and the bone scraped. The limb was placed again in plaster and the child allowed to go on crutches. On April 15, a fragment of dead bone escaped from the sinus at the middle of the shaft, but not one fragment of that implanted had been discharged, and the new tissue was so solid as to barely permit of a bending at the point of injury where previous to the grafting there had been the freest mobility. On May 27, a little over three months from the time of bone-grafting, the leg had become so firm that the patient could walk upon it without crutches and unaided. The wound was quite well, but the sinus below still discharged a little pus. I chiselled out some denuded bone at the bottom of the sinus. He recovered speedily from the operation, and on June 26 left the hospital, having run about the wards with full use of his leg from the time of the previous dressing in May. The sinus below was not yet entirely healed.

Once since then the boy presented himself for examination. There was then no material change in his condition. One of the most remarkable features of this case is the fact that an ununited fracture with great loss of substance was made to heal by grafting in bone from a rabbit while there was two inches below the fracture a progressive ulceration and necrosis of the shaft of the bone.

CASE II.—I was asked by Dr. Gailey, of this city, to see with him, at Harper hospital, a case of syphilitic necrosis of the skull. I found a man, sixty-four years of age, with a round spot of denuded and dead bone just to the left of the median line and involving the parietal tuberosity. The scalp was wanting over nearly all of this surface, the necrosis extending for a few lines under the overhanging skin. He had a partial paralysis of the right side and showed some signs of dementia; but as I do not propose to discuss this case in full, and shall limit my remarks to what especially concerns the subject of this paper, I shall refrain from describing in detail those symptoms which could have no possible bearing on the question of bone-grafting.

The dead bone was still firmly attached to the living.

I proposed to Dr. Gailey that he should remove the dead bone, and that we should endeavor to replace it by grafting living rabbit bone in small fragments on the dural surface.

This was accordingly done on October 17, 1891. Dr. Gailey removed the whole necrosed piece with trephine and chisel. Underneath, in about the centre of the area, was found a gumma occupying the whole thickness of the dura and about as large as a silver quarter of a dollar. In the mean time I had killed a rabbit and removed some of the bones of the skull. These proved to be too tough to break in the mortar, as I had done with the more brittle tibia, and I was obliged to cut them in minute pieces with a bone-forceps. They were then dropped

immediately into a solution of warm carbolized water. The dura was then covered with these fragments, except at the spot occupied by the gummy tumor. The greater number of these pieces of bone lay exposed on the surface of the dura, but some of them were placed under the overhanging edge of skin, and were thus, so to speak, embedded between the dura and the scalp. The whole surface was then dusted with iodoform and covered with iodoform gauze. The course of the wound was absolutely aseptic. There was no discharge whatever. The dressings were not changed until October 24, when the fragments of bone were found to be firmly adherent to the dura. The second dressing was on October 31, and the third on November 5, and after that the dressings were removed and the wound was examined about once a week. The pieces of bone became firmly attached to the dura and the most of them became covered with granulations. Those which were embedded between the scalp and the dura healed firmly in place. Of those exposed, a few which were adherent on their lower surface continued on the upper to show the smooth surface of bare bone.

On December 5, when Dr. Gailey removed four of the least promising of these pieces, he found them to be so adherent as to require considerable force to detach them. On November 7, the man was seized with severe epileptiform convulsions and afterwards showed a marked degree of aphasia, phenomena which indicated lesions at other points within the cranium. With these and their significance I have nothing to do in this paper. He recovered, and walked the halls as usual with some paresis, aphasia, and mental weakness.

On examining the wound on January 5, eighty days after the operation, I found the condition to be as follows:

The skin around the edges had grown fast to the underlying dura, inclosing all of the bony fragments which had been placed under it. The whole edge felt hard and firm, but whether from the formation of new bone or not must remain uncertain. Over the exposed red surface of the dura mater could be seen little scales which felt rough and firm to the touch. These were the bone-grafts which covered the whole surface except where the gumma had been. The gummy tumor had been touched by Dr. Gailey with a mild caustic, and the surface had become smooth and red. A few of the bone-grafts were not covered by granulations, but were firmly attached to the dura. The dura was much firmer than at the time of operation, and in one spot was fairly unyielding, but I cannot assert that there was actually any formation of new bone.

I regard it as demonstrated by these two cases that small pieces of rabbit bone, implanted, while living, into human tissues under strict antiseptic precautions, will heal in and become, for the time being at least, integral portions of the organism.

Their after-fate must remain, of course, doubtful until exact investigation shall demonstrate its nature. The first case shows conclusively that when put between the fragments of an ununited fracture, they may cause the development of new bone. How the process takes place is another question. It may be that the bone-cells thus embedded may absorb nutriment by imbibition, may grow and propagate cells of similar character. This has, at least, not been demonstrated to be impossible.

It may be, on the other hand, that they serve a merely temporary purpose as a stimulant to the tissues in which they lie, causing more vigorous cell-prolifera-

tion and activity, and, at the same time, acting as a scaffolding for the growth of new blood-vessels and granulation tissue. If this were all that could be accomplished by bone-grafting from living animals, it would seem to me to entitle it to be accepted as an acknowledged surgical procedure. It is far easier to kill a rabbit, after making the beast thoroughly aseptic, and to procure the fresh, living aseptic bone, than to manufacture decalcified bone after Senn's method; and I, for my own part, cannot doubt that the fragments of living aseptic bone would answer the purpose of a stimulant and a scaffolding better than dead decalcified bone. We have, besides, the possibility that the living bone may take an active part in the bone-regeneration, even though it should undergo afterwards a rapid absorption.

As regards the technique of the operation of bone-grafting there is much to study. We may question,—

(1) Whether young bones, or even cartilage, might be better or worse adapted for this purpose than old bones.

(2) Which of the many animals at our disposal would yield the most satisfactory results.

(3) Whether this process would be most likely to succeed in young or old patients, and what effect, upon its success or failure, we should have to expect from the existence in the patient of various morbid conditions, such as syphilis, tuberculosis, and the like.

The first of these two cases would seem to demonstrate that it will prove a most invaluable procedure in the treatment of ununited fracture in young persons. We may hope that it will prove equally efficient in causing the rapid healing of bone cavities. It is evident from the study of the two cases that an important point in securing success is to surround the bone-grafts with living tissue. The more thoroughly they are buried, the more intimately they come in contact with neighboring structures; the more constantly they are kept bathed in nutritive fluids, the greater will be their chances of living, and exerting an active influence on the tissues in which they lie buried; and, on the contrary, exposure to the air, deficient supply of nutritive fluid, and insufficient support must lessen their vitality and their capacity for adapting themselves to their new surroundings.—Dr. T. A. McGraw in *International Medical Magazine.*

THERAPEUTICS.

ON THE DIGESTIVE FERMENT OF THE CARICA PAPAYA IN GASTRO-INTESTINAL DISORDERS.

DURING the past year, having devoted considerable attention to the clinical application of papoid, especially in digestive disorders, I have had the satisfaction of witnessing a number of very interesting results, to which I wish briefly to direct attention. The successful application of physiological data must be my excuse for again directing attention to a remedy which has been studied by such eminent investigators as Wurtz, Bouchut, Finckler, Rossbach, Roy and Wittmach, and one furthermore the physiological and therapeutical actions of which may be regarded as pretty fully established. I will point out very briefly

some of the clinical uses and the conditions of its successful employment.

The physiological actions of papoid as a digestive agent have been thoroughly established. It acts upon albuminoids hydrating and converting them into peptones, as fully demonstrated by Herschell. It converts starch with great promptness, the ultimate product being maltose. It emulsifies fats. Herschell declares that it has a direct tonic action on the stomach, stimulates the secretion of gastric juice or pepsinogen. It acts at all temperatures, but attains its maxim activity at about 130° Fahrenheit. In several important points it differs from pepsin. Papoid acts best in an alkaline solution, but also can act in fluids with an acid or neutral reaction; pepsin requires an acid solution. Papoid is freely soluble and is most active when in concentrated form; pepsin requires free dilution. Herschell also points out the greater digestive power possessed by papoid than either pepsin or pancreatine, and states "that it can be used when pepsin is contra-indicated or powerless." Papoid has no action upon living tissues, and is positively innocuous when swallowed in any quantity that is likely to be administered. Papoid is useful when digestion has been overtaxed, or when the secretion of gastric juice is absent or deficient. Experiments of my own and others have satisfied my mind of the remarkable digestive activity of papoid. In one of the experiments referred to, the constituents of a hearty dinner of bread, meat, potatoes, peas, mince pie, and other substantials, were placed in a test tube and treated with papoid and bicarbonate of sodium and a small amount of water. The result was very satisfactory indeed; the meat rapidly softened, and the other ingredients gradually disintegrated, forming a pultaceous mass, which finally separated into a grumous sediment and an overlying albuminous, dark colored liquid. Papoid acts in an alkaline solution even better than in acid media. It is evident that it is specially useful where there is indigestion due to deficient secretion of gastric juice. In such cases, the administration of an alkaline solution of papoid favors gastric digestion both directly and indirectly: First, by digesting albuminates and softening masses of food. Secondly, by the action of the papoid in stimulating the secretion of the pepsin gland. It retards the fermentation of the undigested masses of food in the stomach and prepares them for intestinal digestion. In the contrary case where the stomach contents poured into the duodenum are so acid that they prevent the action of the tryspin, papoid prevents duodenal indigestion by taking the place of the pancreatic ferment. As Herschell says, it is obviously of no use to give pancreatine by the mouth, as it is at once destroyed by the acid of the stomach, and it is practically impossible to administer sufficient alkali to neutralize the excess of acid, and it would moreover be unwise, because it would stimulate still further the secretion of the acid. Papoid is of the greatest use here. In gastralgia, which often accompanies the condition just named, papoid with bicarbonate of sodium gives immediate relief. It is also useful in irritable stomach nausea and vomiting. In gastric catarrh, and the catarrhal conditions of the intestinal tract, popularly known as biliousness, papoid administered in hot water fifteen minutes before meals, cleanses off the mucus and places the mucous coat of the digestive organs in a good condition for secretion. It is useful in the treatment of irritative diarrhœa in young children to whom it may be given in combination with salol or salicylate of bismuth. The use of papoid in treating disorders of the digestive organs may be summarized somewhat as follows:

(1) In actual or relative deficiency of the gastric juice, or its constituents.
  (*a*) Diminished secretion of gastric juice as a whole. Apepsia; anæmia and deficient blood supply, wasting diseases.
  (*b*) Diminished proportion of pepsin; atonic dyspepsia, atrophy of the gastric tubules.
  (*c*) Dimunition of hydrochloric acid. Achlorhydria; carcinoma.
  (*d*) Relative deficiency of gastric juice, overfeeding.
(2) In gastric catarrh.
  (*a*) Where there is a tenacious mucus to be removed, thus enabling the food to come in contact with the mucous membrane.
  (*b*) Where there is impaired digestion.
(3) In excessive secretion of acid. To prevent duodenal dyspepsia.
(4) In Gastralgia, irritable stomach, nausea or vomiting.
(5) In intestinal disorders.
  (*a*) In constipation due to indigestion.
  (*b*) In diarrhœa, as a sedative.
  (*c*) In intestinal worms (this claim the writer has not personally verified, but as the intestinal mucus, which shields the worms is removed by papoid, it is easily understood that their removal would naturally result after its administration).
(6) In infectious disorders of the intestinal tract.
  (*a*) Where there is abnormal fermentation by its antiseptic action which may be heightened by combination.
  (*b*) Where there are foreign substances present, its detergent effect may be utilized by cleaning out the debris from the intestinal contents by digestion.

(7) In infantile indigestion; here papoid not only readily peptonizes cow's milk, but the resulting curds are also soft and flocculent, resembling those of breast milk.

The dose of papoid ordinarily, is one or two grains, but five grains or more may be used, the only objection being that of useless expense and waste, except where very prompt effects are desired.—Extract from an article by Dr. Frank Woodbury, in *New York Medical Journal* of July 30.

MEDICAL MELANGE.

Fighting Mice with a Bacillus.—Professor Loeffler's bacillary crusade against the field-mice of the Thessalian plain has ended in victory. It will be remembered that Professor Loeffler some time ago discovered a new bacillus, the "bacillus typhi murium," which has the power of producing a certain disease in mice, and in mice alone. A plague of field-mice, threatening to destroy the harvest, having appeared in Thessaly, he was appealed to by the Greek government, and immediately started for Athens. He began his experiments by treating field-mice in the laboratory with injections of his bacillus cultivation, and when these experiments showed his method to be undoubtedly the right one, he started for Thessaly with a staff of Greek doctors. Bread crumbs, saturated with the bacillary substance, were strewn broadcast over certain fields, and as early as a week later the results were visible.

THE IDEAL CONSULTANT.—When, says the *Lancet*, nearly a generation ago, Sir Henry Acland in a memorable publication introduced the Oxford museum to the academic world and foreshadowed the benefits it would bring to liberal culture as a whole, and more particularly to that of the physician, he gave a picture of the "ideal consultant" which, if more comprehensive than detailed, may be said to come as near perfection as such compendious characterizations are capable of reaching. In a quotation from Suidas he adduced the answer of the consultant Trophilus, when asked to define the all-accomplished physician: "It is he," said Trophilus, "who is able to distinguish between what can and what can *not* be done." This definition may be said to cover every requisite in the medical advisor in whatever circumstances the exigences of his calling may place him; but it does not, of course, enter into native aptitudes, or acquired dexterities, or, in short, into the *ensemble* of qualifications which combine in the physician who is ever ready and never at fault. One definition, or rather indication, of what the successful consultant really is was incidentally given some years ago, by an outsider, in a strictly professional controversy—a definition which embodies the lay belief in the personal power of the physician apart from what special discipline can make him. "A great physician," he said, "is a great artist." This also is true, and will be found on closer analysis to explain the extraordinary success of practitioners whose book-learning or laboratory training is notoriously far inferior to their powers in diagnosis and their success in treatment. The Athenian intellect at its best and in its most characteristic mood—essentially artistic as it was—seemed to fulfill the requisites which from time to time attain medical embodiment in a Sydenham, or, to come within our own day, in a Bamberger, whom, *consensu omnium*, each morning's encounter with cases of every kind in the Vienna wards found seldom or never at a disadvantage. That intellect, in its combination of nimbleness with strength, of centripetal insight with sense of proportion and judicial balance, has been described for all time by Thucydides in his wonderful picture of Themistocles. He dwells on the native understanding of "that Athenian of Athenians"; on his power, without previous information or after-thought, with, indeed, the briefest consideration of the problem in hand, to form a picture in his mind of what it really implied and of what its solution would yield—diagnosis, in short, and prognosis, almost improvised as to readiness; and again, when the problem admitted of only an approximate or provisional solution he could—"this way and that dividing the swift mind"—alight on the better and avoid the worse interpretation, even in the absence of previous prompting or of the data indispensable for less artistic minds. The whole passage (*Thuc.*, i, 138) is well worth pondering in this connection, and will serve to explain how the idea of an "artist" dominates the popular conception of the consummate physician—as is, indeed, involved in the German word "Arzt," which Becker rightly derives from the Low Latin "artista." Noteworthy, too, is the fact that the intellect here typified is always genial, always repays the confidence it invites by possessing the patient with the belief that his malady is indeed of personal interest to his adviser, who considers, and pronounces, and prescribes as if he were in the other's place. That is what Celsus means when he talks of the "hilaris vultus" of the ideal consultant—what Horace implies by the "deformis ægrimoniæ dulcibus alloquiis."

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

OBSERVATIONS ON THE PROGRESS OF SURGERY IN OUR OWN DAY.*

By DONALD MACLEAN, M. D., Detroit, Michigan.

The multiplicity of associations for the advancement of science is one of the most striking and most valuable features of the age in which we live. The marvellous improvements in travelling facilities have rendered this possible, so that surgery, not less than other departments of modern science and art, is indebted for its present unprecedented advancement to the practical applications of that particular form of motion commonly called steam. Not to do more than mention the production and dissemination of surgical literature made practicable, and the opportunities for personal contact and the interchange of opinion and experience made possible, both of which sustain the mighty stimulus of emulation, and which have been secured to us through the benificent power of steam, —we of the very generation who have seen and known all about it, sometimes, I think, fail to realize the significance. Medical associations, as we now have them, were not possible in former generations; and while many and various influences have combined to secure the unprecedented advance which no one can deny surgery to have made in our day, my firm belief is that the union and communion between different men and different schools and different nations, rendered possible by the means referred to, is one of the greatest of all the powers which have worked together for the development and improvement of this the most directly humanitarian of all the arts and sciences.

While claiming for such associations as the Canadian Medical, unstinted credit as a means of advancement, I am far from being so certain that such functions as the one which your kind and generous partiality has accorded to

*Abstract of the Address in Surgery delivered at the annual meeting of the Canadian Medical Association, in Ottawa, September 22, 1892.

me, are to be regarded as the most effective or profitable mode of using the time and energies of the members. I am an ardent advocate of such meetings as the present one. The reading and discussion of original papers, the reporting of cases, the exhibition of instruments and specimens, the congenial gathering of ourselves together, sometimes from long distances, the recalling of old associations and the forming of new ones, the hospitable and convivial breaking of bread and drinking of water in each others society, the after-dinner speech and all that these imply—I approve of with all my heart. But when it comes to didactic addresses on surgery, the progress and the wonder and the glory thereof, I am not so clear, unless peradventure, the orator happens to have the power, genius and courage of a Tait to electrify his audience and the whole profession with the originality and reasonableness of his revolutionary views as to the best ways of teaching surgery, or the no less impressive force and grace of a Hingston, by virtue of which the mental eye of the greatest medical association opens widely in amazement and delight as a system of aboriginal surgery practiced in the wilds of far off America is unfolded to it in language remarkable not less for its simplicity and clearness than for its eloquence and pathos. Happy are the orators who can deliver, and the associations which have the privilege of listening to such addresses.

In undertaking to speak of the progress of surgery in our own time, it will at once become obvious that on such an occasion as the present, it is out of the question to attempt to do more than mention a few of the more salient features of the theme as they appear to the individual who for the time being addresses you. To treat the subject exhaustively, endeavoring to set forth in due form and proper order the manifold steps and processes, and the parts played by different individuals in attaining the results in which we so much exult, implies an effort transcendently above the broadest estimate of the scope of my present duty. The utmost I can attempt on the present occasion is the presentation of a few thoughts suggested by a contemplation of some of the changes in surgical thought and practice which have taken place during the generation to which we belong.

You and I have been interested spectators of, and more or less active participants in, a great contest with enemies of our common humanity of the most malevolent and uncompromising kind. This battle commenced long before our day, and without doubt, will continue to rage long after we have individually been forced to lay down our arms and pass over to that vast majority which has preceded us. In the meantime, however, we pause for a brief space in the thick of the fight, for the purpose of permitting one of the rank and file an opportunity of recording a few of the impressions made upon his mind, respecting the progress of events in that part of the eternal struggle in which you and he have had the honor of playing some part, each one according to his ability, whether that be great or whether it be humble.

In attempting to explain the rapid progress of surgery in recent times, and summing up the most powerful of the agencies by which this progress has been effected, large credit has been accorded to two or three events which certainly have borne a sort of pivotal relation to the whole subject. These are: First, the discovery of anæsthetics, the influence of which is unquestionable and incalculable. The second is, in a word, bacteriology, of which it may be said, the influence

for good has been practically infinite. The third I have already mentioned, namely, steam, and of this agency I think it may be truly said that its influence has been as great as that of any other, not excepting even those just mentioned. There are at least three other agencies of a general character whose influence has been, in my opinion, very great, although I do not think they have always received the recognition to which they are justly entitled. The first of these might be described as "Our Inheritance" or "Birthright." I refer to the great stimulus given surgery by the life and works and teachings of such men as Sir Astley Cooper, Sir Benjamin Brodie, John Bell (the true progenitor of ovariotomy and all that that implies), Liston and Syme, Langenbeck and Desault, and many others who adorned the generation immediately preceding our own. If the torch of surgery has burned more brilliantly and effectively in our day than in any preceding age, to the inspiration supplied by these great men is due much of the credit. The stimulating and inspiring influence of their characters and labors has warmed into active, earnest and successful efforts the Listers, the Senns, the Taits and all the captains of the hosts of our own great and notable day and generation. The second is the characteristic spirit of the age which has had its effect upon other departments of science as well as on surgery. I mean that spirit which is so well exemplified in the work and the methods of Darwin and his followers who once for all demolished that great stumbling block in the way of scientific and philosophical progress, namely, the idolatry of authority with the resulting dread of original and independent speculation. In our day surgeons, like the workers in other fields of science and art, have claimed the right to think and reason for themselves, and to pursue their speculations to their ultimate conclusions, and in so doing have in large measure developed the faculty of judging the proper relations between observed facts on the one hand, and speculative deductions therefrom on the other.

The day is past when an observing and thoughtful surgeon would tremble in the presence of his own observations and refrain from reasoning out any theory based thereon to its logical conclusion or applying it in practice, lest peradventure it might land him in a contradiction to the previously accepted beliefs which with their accumulated load of inherited respectability have been handed down to him to be cherished and worshipped as the *ultima thule* of all truth and wisdom. How many pathological, anatomical and surgical dogmas of venerable antiquity has our generation seen swept away like so many stumbling blocks and rocks of offense in the way of the benediction-laden ship of modern progress?

In this great work may we not justly claim for the new world as large a mead of praise as for the old? Is it not a plain fact that the spirit of original investigation and independent speculation has been abroad in every section of this great western hemisphere, in consequence of which an amount and kind of surgical progress has been accomplished which has commanded respectful recognition from the whole world, and especially from those places in Europe hitherto regarded as fountain sources of all medical and surgical truth. This is one of the most remarkable, and to us at any rate, one of the most interesting, features of this great surgical age. In times past American students have flocked to European schools to complete their surgical education, and do so yet undoubtedly with great advantage. Nevertheless the time has come when the

necessity for such pilgrimages is becoming every day less and less apparent, and when the question is more and more asked, and with increasing show of reason, whether we are not in a position to make at least a reasonable return in kind for all that the east is able to bestow upon us, and to confer as valuable gifts upon the surgical pilgrim from Europe as American pilgrims are able to obtain there. The current has certainly begun to flow in this direction and I am convinced that it will continue to do so until a course of American surgery will come to be regarded as indispensable to Europeans as in former times a European one has been to Americans. The beneficent results which such a system of reciprocal instruction and inspiration would insure directly and indirectly to humanity in general, might possibly be foreshadowed in the ecstatic flight of a poet's dream or a prophet's imagination, but certainly it cannot be done justice to in the common-place terms and limitations of such a discourse as this.

A third, and, perhaps, equally potent factor in the progress of modern surgery, is the creation and growth of the so-called specialties. Notwithstanding the fact that it has been fashionable in certain quarters to sneer at, or even to condemn, this more or less artificial division of labor, and notwithstanding the undeniable fact that some rather serious abuses have arisen therefrom, and that it has not been altogether an unqualified blessing, still it is impossible to close our eyes to the fact that otherwise unattainable advantages have accrued to surgery by the devotion of certain individuals, to more or less clearly marked out segments of the great field. That such individuals should come to be known as ophthalmologists, gynecologists and so forth, was no more than natural and proper, provided always, that they started out in the first place as fully equipped general surgeons.

The ophthalmologist or the gynecologist who is not a general surgeon is like a sailor whose powers as a navigator are confined only to one side of his ship. In other words, the exclusive specialist, the man who knows practically, nothing, outside the narrow artificial limitations of his own speciality is *prima facia* a quack, and for his existence and his foolishness honest scientific specialism should not be held responsible. *Every surgeon need not be a specialist, but every specialist must be a surgeon.*

I do not know that there could be a better criterion of the progress of surgery in recent years than a fair and impartial study of the authoritative utterances of some generally recognized master of a bygone age in contrast with what we are able to note as to the present state of the art. For this purpose allow me to call your attention to the address in surgery delivered before the British medical association at its annual meeting in Leamington, in August, 1865, just twenty-seven years ago, by James Syme, then professor of clinical surgery in the university of Edinburgh. It is but natural for me to select this address as my text, first, on personal grounds, having had the privilege of enjoying, as a student, an intimate acquaintance with the author; and secondly, because it is in the nature of a review of the progress of surgery in a given period, namely, forty years, as it appeared to one who deservedly stood in the very front rank among the teachers and apostles of the art and science of surgery during the whole of the epoch covered by the address,—one whose doctrines are to-day quoted with respectful consideration at least as frequently as those of any individual who has ever taught surgery, unless, perhaps, with the single exception of John Hunter.

The address is characteristic of the man and of his life work, plain, direct, uncompromising, earnest and practical, "for he taught them as one having authority and not as the scribes," and a great multitude followed him.

I will try to select a few of the most suggestive points in this address for our present consideration.

The dressing of wounds is, of course, one of the most interesting topics referred to, and in that connection the old method which consisted in hermetically sealing the edges or cut surfaces of a wound and retaining them in that condition for a certain definite orthodox period of time before changing the dressing is condemned, the result of this treatment being a total prevention of union by first intention. "To avoid this great evil," says the writer, "I advised that the edges should not be brought together until the bleeding had ceased and that there should be no impermeable covering placed over them. The principles which I thus endeavored to establish are now, I believe, generally recognized in practice."

It was in accordance with the eternal fitness of things that his own son-in-law should have been the one to take up this subject where Syme left it off and to have worked out all those theoretical and practical details of wound dressing which are now so universally known and practiced under the title of antiseptic and aseptic treatment. Without pausing to discuss the merits of this much debated and somewhat hackneyed subject, from either an abstract or practical point of view, we must all admit that the industry and faithfulness with which it has been worked out have brought forth good fruits of a practical character and have certainly entitled their distinguished author to all the credit and honor which have been so abundantly showered upon him by a grateful and appreciative profession. Moreover, we are in a position to claim for the results of our wound treatment to-day a degree of safety and efficiency which Mr. Syme would be the first to recognize and applaud if he could have the opportunity of observing it.

In discussing the subject of articular disease, rest, counter-irritation by means of the actual cautery, and in the advanced cases resection of the articular surfaces, together with general tonics at all stages, comprised the treatment recommended. Thanks to the teaching of American surgeons under the leadership of Dr. Louis A. Sayre, of New York, we are able to claim material advance in this department of practical surgery. Rest and extension by weight and pully—compression and protection—as well as rest by well-fitting plaster of Paris casts, extension splints and braces of various kinds, the free use of tenotomy, early opening and scraping out of all tubercular matter and other injurious debris from the affected joint with or without removing the osseous surfaces,—all these have been added to our resources since Syme's day, and it is worthy of note that the operation of resection of the hip-joint, now so successfully practiced in suitable cases, does not seem to have ever been taken into consideration by him or anyone else, at that time, at least in Europe.

The subcutaneous treatment of loose cartilages in the knee-joint is mentioned as a safe and easy method of treatment, but with our modern safeguards against septic infection we do not hestitate to cut right down in any case of the kind, remove the offending body and close up the wound just as we would do in any other part of the body.

For the arrest of hæmorrhage the use of the silk ligature, leaving both ends protruding to furnish drainage, is strongly advocated. Now we use a carefully prepared animal ligature, cut it short, close the wound, apply a comfortable protective dressing and confidently look for union by first intention, and we do not expect to hear from the ligature afterward.

Referring to the surgery of the head we meet at once with the matter-of-fact statement that "much has been done in the way of improvement," and the following instances are cited:

(1) An improved method of enucleation of the eyeball.
(2) Bowman's operation for fistula lachrymalis.
(3) Tenotomy for strabismus.
(4) Improved methods of treating nasal polypi.
(5) Tonsillotomy.
(6) Excision of the maxillary bones for tumors.

No mention whatever is made of the operation of trephining. In his book on the principles of surgery, however, we find a description of that operation along with this commentary: "Cases admitting of this operation are extremely rare and I never knew a successful case of it." If time permitted us here and now to present the testimony of the ophthalmologist, the otologist, the laryngologist, and, last but not least, the brain surgeon of to-day, as to the surgery of the head as a definite field for surgical effort, how marvellous would the contrast appear.

In speaking of the thoracic region the only point considered worthy of mention by Mr. Syme is the diagnosis and treatment of cystic tumors of the mammæ. Had resection of one or more ribs for empyema been dreamed of at that time it certainly would not have been omitted. So that we may fairly reckon that most satisfactory procedure in the long list of solid surgical advances gained within the last quarter of a century.

"Descending to the pelvis" (to use his own words) "the following substantial steps are noted": (1) The treatment of hydrocele by the injection of the tincture of iodine after tapping. (2) The treatment of the diseases of the rectum, fistula, fissure, hæmorrhoids and stricture by methods precisely similar to those now used. No mention is made of operations for cancer of the rectum, which are so frequently and successfully performed nowadays, especially since resort has been had to the method of first removing the coccyx and if necessary a portion of the sacrum.

Stone in the bladder and stricture of the urethra are discussed and in the former the left lateral operation of Cheselden is advocated, and in stricture gradual dilatation and external urethrotomy are recommended as the most suitable methods of treatment, and for my own part, I am inclined to believe that these teachings have not been materially improved upon up to the present day, although there is no doubt a certain field of usefulness for internal urethrotomy.

Speaking of the female pelvis he says, "the most remarkable change that has taken place in the way of improvement is in the treatment of vesico-vaginal fistula which was formerly held to be nearly if not altogether incurable, and is now remedied no less easily than certainly, through means of silver sutures for the introduction of which we are indebted to Dr. Marion Sims." In contrast with this brief but authoritative utterance of the foremost surgeon of Europe,

twenty-seven years ago, we have to set the whole science and art of gynecological surgery with its magnificent record of brilliant discoveries in pathology, and its still more brilliant operative procedures for the relief of suffering and the saving of life. Add to this the marvellous fact that there is hardly a single viscus contained in the abdominal cavity that has not during these few intervening years been securely placed within the reach of the surgeon's diagnostic and operative power. Even to enumerate the individual operations and other definite and assured gains in this great field of modern surgery would require an expenditure of time which cannot be afforded, besides any such enumeration being superfluous to such an audience as I have the honor of addressing.

It is in regard to the contents of the various cavities of the body, the cranium, the thorax, the abdomen, the pelvis, that the most valuable and the most astonishing surgical advances have been made, and I think it is no more than the simple truth to say that neither Syme, nor any single individual of his time, was able in their most hopeful and prophetic moments of surgical aspiration to conceive of anything approaching such results as have been positively and permanently arrived at. To my old master it could not, however, fail to be a source of the utmost satisfaction, could he but know it, that to some, in fact a goodly number of his own pupils, the world is directly and indirectly indebted for a great deal of the success of this great movement in the onward march of surgery.

It would no doubt be an easy matter to illustrate in other ways and to much greater extent the progressive changes which the science and art of surgery have undergone in our day, and it would no doubt be an interesting and profitable exercise to consider in detail the individual steps and the order and manner in which they have been laboriously accomplished, and to call the roll of the leaders who in many lands have headed the victorious army in its ceaseless march from victory to victory. But time forbids. I hope and believe, however, that brief, fragmentary, imperfect as this glance backward and around us over the field of action has been, that still it may be regarded as sufficient to justify us in appropriating on the present occasion, the concluding words of the address of which such free use has been made at this time. "In conclusion, Mr. President and gentlemen, I beg to express my hope that from what has been said, surgery will not appear to have stood still or pursued a retrograde course during the last forty years; but on the contrary to have been improved in many important points of practice and to hold out the prospect of further advance; so that when forty years hence some senior member of the association shall take a similar retrospect he will find no lack of materials for illustrating the march of progress."

One more prophetic utterance made at or about the same time by one of Syme's own colleagues (Sir James Y. Simpson), I feel impelled to quote here, although its scope is not limited to the field of surgery but extends to larger and more indefinite departments, in all of which we as members of the medical profession have a strong and direct interest.

"It may be, also, that the day will yet come when our patients will be asked to breath or inspire most of their drugs instead of swallowing them; or at least when they will be changed into pleasant beverages instead of disgusting draughts and powders, boluses, and pills. But that day of revolution will not be fully realized till those distant days when physicians—a century or two hence—shall

be familiar with the chemistry of most diseases; when they shall know the exact organic poisons that produce them, with all their exact antidotes and eliminatories; when they shall look upon the cure of some maladies as simply a series of chemical problems and formulæ; when they shall melt down all calculi, necrosed bones, etc., chemically, and not remove them by surgical operations; when the bleeding in amputations and other wounds shall be stemmed, not by septic ligatures or stupid needles, but by the simple application of hæmostatic gases or washes; when the few wounds then required in surgery shall all be swiftly and immediately healed by the first intention; when medical men shall be able to stay the ravages of tubercle—blot out fever and inflammations—avert and melt down morbid growths—cure cancer—destroy all morbific organic germs and ferments—annul the deadly influences of malaria and contagions, and by these and various other means markedly lengthen out the average duration of human life; when our hygienic condition and laws shall have been changed by state legislation so as to forbid all communicable diseases from being communicated, and remove all causes of sickness that are removable; when the rapidly increasing length of human life shall begin to fulfill that ancient prophecy, 'the child shall die an hundred years old'—when there shall have been achieved, too, advances in other walks of life far beyond our present state of progress; when houses shall be built, and many other kinds of work performed, by machinery and not by hands alone; when the crops in these islands shall be increased ten fold, and abundance of human food be provided for our increased population by our fields being irrigated by that waste organic refuse of our towns, which we now recklessly run off into our rivers and seas; when man shall have invented means of calling down rain at will; when he shall have gained cheaper and better motive power than steam; when he shall travel from continent to continent by submarine railways, or by flying and ballooning through the air; and when—to venture on only one illustration more—tiresome surgical addresses shall no longer be required to be written by long-winded so-called orators, nor listened to by the long-suffering, uncomplaining members of associations." (This last sentence is slightly paraphrased from the original).

These utterances unquestionably seemed altogether utopian at the time they were breathed forth by their gifted, far-seeing author; but from what has already been realized in the directions here indicated are we not justified and encouraged to look to the future with the keenest feelings of hope and confidence, as well as to the past with equally lively feelings of pride and gratitude; for who shall presume to say so far as the march of modern scientific medicine and surgery are concerned, "thus far shalt thou go and no farther."

For my own part, Mr. President, I have long felt that our profession, as such, has been entirely too modest. Like true worth in general it has refrained from asserting itself and demanding the power and position justly due it. The irresistible logic and force of facts and circumstances, however, are working many deeply important changes on men and things, and to the watchman on the watchtower nothing is more obviously perceptible among the coming events of the near future than the promotion and elevation of the medical profession to a position of eminence and power which its intrinsic greatness and vital usefulness justly entitle it to.

ON THE APPLICATION OF THE ELECTRIC CURRENT IN CERTAIN CLASSES OF DISEASES.*

By JOHANN FLINTERMANN, M. D., Detroit, Michigan.

It is with some feeling of embarrassment that I come before you to-night with a weak attempt to make a few remarks on the application of the electrical current in the treatment of certain diseases. Looking through the daily newspapers of our land we hardly find one that does not contain an advertisement recommending the use of electricity for every disease. Very seldom do our medical journals contain articles scientifically treating of the use of electricity in medicine, although the advertising pages abound with recommendations of electrical batteries, instruments and appliances. The offices of medical men are more or less provided with batteries, the electric current is frequently applied, but reports of cases treated by electricity are seldom given. When I see the electric current applied, and the way in which it is done, I very often ask myself how is it that professional men, who are careful in administering medicine and who follow the strictest rules in cases of operation, become careless when they resort to electricity as a curative remedy. Is electricity in itself a thing that does not need careful study? Where is the man among you who would give to the people a pound of powdered opium and say that opium is a good remedy for stopping pain, leaving it to an unexperienced youngster to give it in any form and any strength? Certainly such carelessness would be criminal and negligent, and yet in electricity just such things are done every day. Without any knowledge of the nature of electricity or the laws which govern its different physical and chemical changes, without which no uniform results can be obtained, medical men resort to electricity. A man who wishes to apply electricity as a remedial agent must make himself familiar with several facts. It is necessary first, that he should have a good knowledge of the physics of electricity; he must understand what instruments are needed, the electrodes, the instruments of precision, the different kinds of apparatus; he must know the laws of physiology, the anatomy of the parts where treatment is to be applied—topographical, systematic anatomy, the histology, the pathology of the processes for which the electric current is used as a remedial agent. Without a thorough knowledge of all these, and without a good knowledge of general medicine the application of electricity is a fraud.

The foremost and principal question is, At what strength must a current, or may a current, be applied, and what means do we have to measure the strength of the current? Two definitions must be familiar to the electro-therapeutist if he wants his actions to be governed by reasoning and calculation, namely, the density of the current and the meaning of the word resistance. Next in importance to these two definitions is the question, How long may an electric current be employed? The question of resistance has lost some of its importance by the absolute measurement of the strength of the current, but anyone familiar with the subject knows that in many instances the question of resistance must be taken into serious consideration. Density of the current is such a very important factor that without it an approximate measure of the strength of a current for

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electro-therapeutic action is entirely impossible. The time has passed when an electro-therapeutist tried to emancipate himself from the uncertain task of ascertaining the intensity of the current by only mentioning the number of cells used or perhaps adding to his report the deflections of an unreliable galvanoscope. Nothing was said about the size of the electrode's resistance of the galvanoscope used in the case. But even to-day we will meet with reports of cases in which the absolute measure of the galvanometer is given without stating to what extent of body-surface the current was applied. What does a report amount to that gives only the number of milliampères without further defining its practical effect? If we state a certain strength for a certain electrical application and if we describe its application for a certain purpose on a certain area of the body, we mean to say by that that the accurately measured area on the surface of the body has been given to a certain quantity of current as a transverse surface in the circuit. Or, to speak more properly, the current must enter and leave certain parts of the body at a certain strength and at a well defined density. The curative effect of the electrical treatment is dependent upon the density of the current passing through the desired parts. According to this explanation to apply a weak or strong current means in the one case to bring these parts of the body under the influence of electrical currents which are more diffusely distributed in the other, under the influence of concentrated currents. If the transverse diameter of the part to be treated does not change, in such a case a weak current or a current of small density can only be produced by the decrease of the strength of the current; a strong current only by an increase. Letting D stand for density of current, I for strength of current, and T for the surface of the transverse section, we have the formula, $D=I\div T$. Or, in case the cross-sections remain constant the density of the current is directly proportional to the strength of the current. If density is the chief factor in the curative effect of the current, and if this leading principle has been formed from experience and experiments made touching upon this point, then it follows from the formula, $D=I\div T$, that if we desire the effect of a certain intensity of a current I′ with a certain density D′, we must take a cross-section T′. Or, in other words, we must apply a certain strength of current on an area of certain surface. This must be our first work when we apply the electrical current, to ascertain the density of the current to be applied by having the intensity of the current divided by the exact measure of the surface area.

In cases of sciatica I should recommend two differently shaped electrodes, one in the form of a rectangular parallelogram and the other of oval shape with a surface of seventy square centimeters and a current of an intensity of four milliampères. In spinal affections, treating by stations, by which I mean that I commence from upwards, and then select different stations below the point, at which I start, I always have the current flowing from the dorsal to the anterior surface of the trunk. In some cases I use large electrodes with surfaces of more than six hundred square centimeters, but keep the D of the current in the ratio of one to eighteen.

For circumscribed cases, as for instance, myelitis transversa, which we sometimes may be able to localize by a spot tender on pressure between the fifth and eighth vertebral bone (*processus spinosi et transversi*), or for chronic intercostal neuralgia over this area and in this region, one rectangular electrode in the back

and one of oval shape in the epigastric region is found serviceable, each electrode measuring fifty-five square centimeters. D=I÷T. D=one-eighteeth=three-fifty-fourths ∴ I=three milliampères.

In cases of the affection of the roots of lumbar nerves, where distinct puncta dolorosa posteriora are found, take a broad plate, covering the lumbar vertebral bones, of one hundred and five square centimeters and an oval plate of one hundred and ten square centimeters opposite on the abdomen. Then figuring approximately, since one is to eighteen as six to one hundred and eight, the intensity of the current ought to be six milliampères.

For an inflamed wrist I use concave electrodes measering thirty-five square centimeters and a current whose intensity is two milliampères. In these cases the current flows in a transversal direction through the locus morbi. But the law, which we have defined, holds just as well for cases where the current flows in a longitudinal direction, if the poles are some distance apart, and if for this reason the curves of the current are able to reach lower points, before they converge again towards the poles, as for instance, in the treatment of the spine in longitudinal direction. In such cases a weak current is used, either ascending or descending; one of the poles is placed on the lumbar vertebral bones and the other on the neck. (If the upper electrode is applied in the neighborhood of the occipital bone, a decrease of strength occurs in the current).

Every rule has its exceptions, and so has our rule of the density of the current. It can easily be proven that in spite of all facts favorable to the principle of weak currents, very often modifications become imperative on account of the impractical size of the transverse sections of the electrodes and the distance between them, not forgetting the locality of the body and the individual case of the disease. In order to illustrate the reason for exception to the rule, I want to mention a case in which we apply a current in a longitudinal direction, having the poles but a short distance apart, and where the curves of the current are only enabled to penetrate to a sufficient depth by great density, as for instance, in a case which we treat by applying the current in the direction from the jugulum to the ganglion sympathici supremum. Here we take two thick buttons, surface only ten square centimeters. Although the sympathicus reacts to the weakest currents, in this case where we use so exceptionally small-surfaced electrodes, the curves of the current are so very few, that only by the high excitability of this nerve can it become evident why the strength of the current is one-fourteenth instead of one-eighteenth. A similar increase in the density of the current takes place in spite of the opposite application of the electrodes. In cases of simple rheumatic affections of the joints, which have no other symptoms than pain by motion, tenderness at pressure, swelling, no color, rubor, but the parts covering the joints are cold, which very often has by reflex action the same effect on the whole extremity, either the arm or leg, D in such cases should be one-fourteenth, and in cases where there is little reaction, one-tenth. The same D must be applied in chronic traumatic affection of the joints. In cases of disease of the joints, where you apply the electric current, it is necessary that a very large area be penetrated by the curves of the electric current, a surface larger than is necessary, when you apply electricity for affection of the medulla spinalis or of a circumscribed affection of a nerve. Therefore a current of considerable D on the electrodes is needed in order to furnish a sufficient quantity

of the current to the diseased joints, in spite of the fact that the curves of the current distribute themselves on a larger area as soon as they have left the electrodes.

Torpid affections of the foot, knee, hand, and in all cases where adhesions are liable to be formed, in which it is your aim to have hyperæmia rather than anæmia, a current of D one-sixth should be applied, and even above this D. It is advisable in such cases to use the commutator. Certainly for diseases of the central organs our rules for density of the current are limited in the opposite direction. In brain treatment as a rule D=I÷T=one-twenty-fourth; in easily influenced individuals D=one-twenty-eighth–one-thirtieth. In cases where applications must be made in the neck, and sometimes in cases where the electrodes are applied in the superior dorsal regions in persons of cerebral anæmia, it is advisable to have D from one-eighteenth to one-twenty-fourth, as very often by the curves of stronger currents a dullness in the head is complained of, as if from pressure, dizziness and a feeling of fainting.

All acute cases with symptoms of high inflammation, all recent, all erethic cases, as for instance, myelitis, neuritis, neuralgia, etc., are best treated by applying the current with a density below the degree mentioned. Individual cases require scrutinizing inquiries and cautious trials as to the degree of density the patient will bear. Very often only half the average D (one-thirty-fifth) is sufficient, often you must apply even weaker currents. In certain functional disturbances with nervous irritation the application of electrical current with small D very often work like a charm. Hemicrania spastica, D=one-seventh, duration two to three minutes, using reophore plate of twenty-two square centimeters, current of about two milliampères; cathode on the angulus maxillæ inferioris, a second reophore plate of fifty-five square centimeters on the cervical vertebral bone as anode. In cases of paralytic form, in order to cause a contraction of the cerebral vessels and capillaries D on the ganglion supremum should be one-tenth, duration thirty to forty seconds. It is, however, always advisable to make the smaller electrode the anode, as it is less painful.

For what length of time a current should be applied during one session, depends on the nature of the affection and personal equation of the patient to be treated. How often such treatment should be repeated depends on the same factors. But one point I always insist on, namely, that the patient, if possible, should rest after each treatment, even if only for a short time.

There are many other points in connection with electrical treatment, which I have not touched upon in my short disclosure this evening. But for lack of time, and that I may not tax your patience long, I shall leave them for some future paper.

A FOREIGN BODY IN THE EAR.*

By WM. LOCKHART, M. D., Detroit, Michigan.

The foreign bodies which find their way into the ear include a great variety of little things—things animate and inanimate.

Of the animate bodies which have been discovered in, and removed from, the

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meatus auditorius externus small insects are the most common, such as spiders, house flies, fleas, and field insects. Occasionly it happens that some larger creature finds entrance, as cockroach or leech, but these occasions are comparatively rare.

Children are exceedingly predisposed to these accidents, especially from the age of three till they are ten years old. Many of them have the pernicious habit of inserting all sorts of things into their ears. But infants are by no means exempt. Not infrequently insects and other extraneous substances will get into their auditory canals to the great distress of the household, and probably to the neighborhood as well. Field laborers, and people lying upon the ground, are frequent victims to insects invading their ears.

In some parts of the country to the south, there is a specie of fly which enters the auditory meatus of man as well as other animals, for the purpose of depositing its ova therein. The fly usually escapes, but the ova hatch and the living larvæ give rise to much local soreness. Among the other predisposing causes to the entrance of insects to the ear, I must not fail to mention otorrhœa. A purulent discharge from the ear is usually peculiarly fetid. Such discharges are quite common among cachectic individuals, and by virtue of their fetor attract such insects as the ordinary house fly, which enter the passages so far that they are unable to extricate themselves and so remain to the great grief of their victim.

Usually considerable pain follows the entrance of an insect into the ear, and if it does not speedily die and also fails to find its own way out, the pain may become intolerable. Nervous symptoms quickly develop, also diminished sense of hearing, and frequently a great buzzing noise is heard in the affected ear, which is sometimes so intensely agonizing as to be unbearable, leading to unconsciousness and delirium. Sometimes nausea and vomiting are prominent symptoms, as is also a frequent cough due to reflex excitement of the pneumogastric nerve. There is also an increase of the amount of the secretions of the nose and mouth. Reflex sensations of pain are experienced in distant parts of the head, neck, and face. These pains are always very acute if the insect be in contact with the membrana tympani, especially if it be living and moving about, when the pain may be accompanied by convulsions or delirium.

Vomiting and coughing are sometimes the only observable symptoms, and the cough so simulates that of a thoracic affection as to often lead to a mistaken diagnosis unless careful inspection of the auditory canal is made.

When the insect, dead or alive, remains in the ear several days, a thin, serous discharge escapes from the meatus; occasionally it becomes purulent but later returns to its former watery consistency. This discharge possesses the characteristic foul odor of all otorrhœas.

If the irritation set up by the presence of an insect in the ear is sufficient to inflame the canal or the membrana tympani the local pain and reflex symptoms are greatly augmented and the drum may be perforated and the inflammation extend by continuity into the middle ear. Abscesses may form and meningitis occasionally develops. But all of these symptoms usually subside quickly upon the removal from the ear of the offending body. Sometimes, however, they subside only partially, and then there ensues a chronic inflammatory condition of the ear passages.

Most of the insects that invade the ear find their way out again before assistance can be summoned, leaving no mischief behind, but only a feeling of very great relief. But when the trouble fails to terminate so fortunately, and the victim does not succeed in freeing himself from his tormentor, he will seek aid from his physician; or, if he be an infant or very young child, he will simply moan and roll his head from side to side until by some lucky chance the surgeon is put upon the right track and seeks for a foreign body in the infant's ear.

The means for relieving the sufferer are usually very simple and efficient, consisting merely of injections of any bland fluid from a small syringe made into the ear. Water alone is often quite sufficient for this purpose. But if the insect be alive our first duty is to quiet its movements. This can be done quickly by wetting a small plug of absorbent cotton with chloroform and inserting it within the meatus for a moment, or by using an injection of a weak solution of bichloride of mercury the insect may be killed and at the same time removed. Frequently sweet oil is used by the patient or his friends, and, materially relieves his distress if it does not entirely abate it. Very rarely does it become necessary to resort to specula and forceps. Repeated washings will succeed if the first one does not. Failure to remove the insect by the first injection is due often to the fact of the body of the insect becoming agglutinated with the cerumen natural to the auditory canal. The cerumen is somewhat resistant to disintegration, and thus holds the insect bound within the canal. It is therefore always well to repeat the washing out process on the following day in order to be reasonably sure that the meatus is thoroughly cleansed of foreign matter.

As an illustration of the severity of the reflex symptoms due to the presence of a foreign body in the ear, whose presence there had continued for a considerable time, I will report a case in point which occurred in my practice:

The patient was a little girl, three years of age, whose growth corresponded well with her time of life, except that the adipose tissues had greatly disappeared from her body. Her muscles were flabby and diminished in volume. In short, her emaciation was extreme. So weak had she become that she lay in her bed powerless to move even sufficient to turn herself. But her head and eyes were in almost constant motion, rolling from one side to the other. The home of this little one is in Mobile, Alabama, from whence she was sent north by the advice of her physician in the hope that change of climate might restore her health, which he believed to be impaired by some constitutional affection, of what name or nature he was unable to determine.

When she was two years old, I was told, her health was perfect. She could talk a little, romped and played heartily with her playmates. About this time she became ill with a severe attack of scarlet fever, greatly prostrating her, but, except for a lingering otorrhœa, she appeared to be convalescing well. Even this symptom disappeared till the discharge was almost imperceptible. But she did not get well, and became fretful and seemed to fall into a state of total collapse, with rapid consumption of all the tissues of the body. She was quite deaf, and would not or could not talk. Could not sleep. Did not want to eat. Drooled continually. Had occasional fits of vomiting and a short spasmodic cough. She cried and moaned a great deal.

All these latter symptoms were present when I saw her first, together with her complete prostration. She had had no convulsions but she appeared stupid,

and it was impossible to engage her attention. During my examination of her, I noticed that the floor of both auditory canals were moist and they smelled badly. Her relatives with whom she was staying while in Detroit, and her sister who came with the child, said there had been a purulent discharge, but that that had all got well. They had not noticed any recent discharge. I also learned that when the otorrhœa was more profuse the patient had been greatly annoyed by house flies around her head. I therefore syringed both ears with warm water, washing out foul smelling masses, which, upon examination, revealed the bodies of a number of flies. Five flies were recovered from one ear and three from the other. The following day the ears were again cleansed of a few fragments of flies' wings and legs. The relief was almost immediate. The child ceased its crying and slept all night the first night. Nothing more was done for her except to order a simple tonic and fresh air. In less than five months she had again learned to walk and was learning to talk, and finally made a perfect recovery, after which she was returned to her home in the south.

INDOLENT ULCER OF THE LEG.*

By G. V. VOORHEES, M. D., Coldwater, Michigan.

Probably there is no surgical disease which so taxes the ingenuity of the surgeon, and requires such patience in its treatment, as chronic ulcer of the leg. These ulcers have been rightly called the "opprobrium of surgery," for in every community are found persons who have suffered with the malady for years and who have sought in vain for relief in all directions.

Why is it that surgeons are so often baffled in treating these ulcers? and What method of treatment promises the best results? are questions with which I propose to deal.

It will not be necessary in a paper of this kind to enter into a description of these ulcers, as they are familiar to you all, so I will proceed immediately to the consideration of the first question, Why are surgeons so often baffled in treating these ulcers?

If I am not mistaken one important reason is that practitioners as a general rule pay but little attention to the study of the pathology and treatment of this malady; they think it of little consequence, and devote their time to what they consider matters of more importance. In their student days they pay but little attention to the application of simple surgical dressings. They practice all the operations on the cadaver, from the amputation of a finger or toe to the operation of lithotomy, but very few spend much time in applying bandages and adhesive plaster. How very few practitioners, even those who call themselves surgeons, apply a bandage properly. Is it strange that they are unsuccessful in treating this malady, when they neglect to make themselves experts in the use of two of the best dressings in the surgeon's armamentarium?

Another reason that the practitioner so often fails, is that he gets so little assistance from text-books. Probably "Gross' Surgery" is the most popular text-book on surgery, and deservedly so, but I am of the opinion that any surgeon who attempts to treat chronic ulcers of the leg with the means which it recom-

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mends, and fails to use the means which it deprecates, will in nine cases out of ten become disgusted and discouraged, and give up in despair. Gross devotes two pages in detailing such remedies as the following, to subdue inflammation and get the ulcer in a healing condition, namely, iodine, nitrate of silver, acid nitrate of mercury, nitric acid lotion, weak solutions of sulphate of zinc, copper, and acetate of lead, creasote and acetic acid, elm and linseed poultices (the last of which he thinks the most suitable dressing), warm water, rest, and general remedies directed to the state of the system; and but a few words to the consideration of the methods of Baynton and Critchett, which I contend are the most philosophical, the simplest, and the ones which will give the best results in the greatest number of cases. Yet, how many practitioners would venture to use them, after reading "that the method of Baynton has many disadvantages, of which one of the most serious is the impossibility of watching its effect, the sore being too much concealed from view." I think very few would be apt to follow the method of Mr. Critchett, which consists in enveloping the foot and leg for some distance above the sore with adhesive plaster, after learning that Gross considers it still more "mischievous" than that of Mr. Baynton. He goes on to say that "these methods may answer very well in the hands of the ingenious originators, but can hardly fail to prove mischievous in the practice of others less adroit and less experienced in the use of the remedy." Not one word of commendation for these excellent methods. Evidently he had never used these methods, or he could not have spoken so slightingly of them.

Other text-books on surgery that I have had access to, devote very little, if any, space to the treatment of chronic ulcers of the leg, and have but little to say of these methods of treatment.

Another reason for ill success is that the practitioners will not take the time, and have not the patience, to dress these sores properly, if they have the skill, and so slight their work, and instead of doing good, do harm, and then discard the dressing after using it but a few times. Perhaps these reasons are sufficient to answer for the general failure in curing this malady, and we will proceed to the question of What method of treatment promises the best results?

Before considering this question, it will be necessary to examine the causes which produce these ulcers. Arterial disease sometimes acts as a cause, though rarely, except in the aged. I have seen in the old, the leg nearly covered with indolent ulcers which were due to arterial degeneration. They are the least amenable to treatment, and the most troublesome cases I have had to deal with. Direct injury, such as gunshot wounds, fractures, and other injuries to the soft parts, frequently cause these ulcers. Soldiers who have received wounds of the lower extremity are common sufferers from this malady. Constitutional diseases, such as syphilis, typhoid fever, eczema, and paralysis, sometimes act as causes; but the most frequent cause of all is that of disease of the veins, and the one, I think, notwithstanding good surgeons think differently, the most amenable to treatment.

In almost every case of chronic ulcer of the leg that we are called upon to treat, we find a varicose condition of the veins, acting as a predisposing and continuous cause. We usually find these ulcers affecting heavy men, especially when they are constantly on their feet, also affecting women who have borne children. The veins being in a varicose condition, the person injures the ankle, or

shin, sufficiently to remove the skin, and a sore is produced which does not heal; the inflammatory action, necessary to the healing process, transcends its bounds, and ulceration results, which continues for an indefinite length of time, unless arrested by nature or art. Often the sore is produced where the veins are varicose, by the scratching induced by the intolerable itching due to the overloaded condition of the veins and capillaries. With the treatment of the ulcers which result from a varicose condition of the veins, I shall particularly speak, although the methods which I adopt will be found in all cases of chronic ulcers almost necessary to success.

Upon proceeding to treat a chronic ulcer of the leg, I have rarely found it necessary to resort to any medication to subdue inflammation. When the sore is in an irritable or inflamed condition, it is usually due to over distention of the weakened blood-vessels, and it is useless to apply lotions, or ointments of any kind, to put the patient on his back, or the foot in a chair; it is also impossible to induce patients to keep quiet long enough to derive any benefit from such a course.

My method of procedure is in some cases, where the edges of the sore are undermined, to incise them freely, which is generally a painless operation, as the tissues are hard, sometimes hornlike, and not supplied with nerves. In some cases of years duration, both the edges and surface are in an indurated condition. I then incise the ulcer freely its entire length, and immerse the foot and leg in warm water, so that the incisions will bleed copiously. In most cases it is not necessary to cut at all, so I immediately apply strips of adhesive plaster, cut about one-half an inch in width and long enough to extend half way, and sometimes two-thirds, around the limb. These strips are applied overlapping each other in form of basket strapping, beginning below the sore and extending above a few inches. It is necessary to apply them firmly and smoothly, otherwise they will produce pain and do harm. This is called the method of Baynton, and the one of which Gross speaks so disparagingly. One objection which he makes is that it requires more skill to apply the straps properly than is ordinarily possessed by surgeons; but I hold that any man with skill enough to be a surgeon, can, with a little practice, apply them skillfully. Gross objects to the dressing because it hides the sore, "that it is too much concealed from view." For my part I cannot see why that is an objection, as it is at first necessary to remove the dressing every twenty-four hours, on account of subsidence of swelling and accumulation of pus. I am sure it is not necessary for the surgeon to view the sore more than once a day, and it certainly is not necessary for the patient to be continually viewing it.

Sometimes, on account of the large size of the ulcer, it is necessary to apply the straps according to the method of Mr. Critchett, which Dr. Gross considers so mischievous. I have never seen any bad results follow the use of this method, and the only objection I have to it is that it requires a great deal of time and patience. But many cases will not recover without this method being used. Therefore, some surgeons, rather than spend the time to apply the proper dressing, amputate the limb. After applying the straps, the patient in the meantime lying down, I bandage the limb carefully from the toes to the knee, and then allow the patient to go about his business, unless the condition of the ulcer is very irritable, when I order him to rest, with the foot in a chair a few days.

I have found that, in order to treat these ulcers successfully, it is necessary to handle them with care. *All rude manipulations must be avoided.* It is not necessary to touch the surface with cloth or sponge, *sponge especially should not be used.* It is even unnecessary on the removal of the dressings to wash the sore as it will be found perfectly clean, and if there is pus on the surface it should not be removed. It is *Nature's salve*, and is of more use than all the salves that men compound.

I sometimes make use of Nature's salve when the granulations are tardy and not inclined to grow, by keeping them in a hot-bed produced by retaining the pus, which I accomplish by applying between the straps and bandage a mass of oakum. The oakum also answers as an excellent substance to catch the pus as it exudes from between the straps, keeping the bandage clean and preventing fetor.

I do not make use of nitrate of silver or any other caustic or wash to hasten cicatrization, as the books recommend, having found them of no avail, but rather injurious. When the granulations are *proud* I have found that firm pressure with the adhesive plaster was sufficient to subdue them to their proper level.

I am satisfied that sometimes, and especially in very chronic and bad cases, the healing process is *hastened* by allowing the patient to use the limb.

Skin-grafting is unnecessary where those methods are used properly. A good many failures to cure chronic ulcers by skin-grafting are undoubtedly due to neglect in the use of straps and bandage in conjunction. It is useless to insert skin-grafts unless the ulcer is filled with healthy granulations to the proper level, and where such is the case the ulcer will cicatrize fast enough from the edges if the adhesive plaster and bandage are properly applied.

I have treated cases of ten, twenty, thirty, and forty years' duration, almost invariably with good results. Of many cases, I have only had two or three failures to cure, and in those cases the failure was due more to the interference or disobedience of the patient than from any fault of the method.

LECTURES.

RÉSUMÉ OF SURGICAL CASES.

By J. B. HAMILTON, M. D., LL. D., Chicago, Illinois.
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FISSURE OF THE TONGUE.

Here is a case of fissured tongue. Fissure of the tongue may occur by an enlargement of the papillæ, almost resembling condylomata. They are not infrequently painful. This patient is fortunate in escaping pain. The fissures are usually very sensitive, and not infrequently painful.

The treatment to be pursued is a mixture of salicylic acid dissolved in glycerine, in the proportion of about ten per cent., and painted upon the tongue twice or three times a day, and usually the fissures will disappear. Sometimes you will find advantage from using collodion in the same way. Collodion contracts the fissures and closes the wound and prevents their further growth.

Iodide of potassium I have sometimes seen produce similar fissures, in cases where the patient had syphilis, and I have been obliged to keep him on it for a long time.

DISPLACEMENT OF TENDONS.

THIS is one of the most uncommon accidents that can befall the ankle-joint, it being no less than a displacement of the tendons which pass under the external malleolus (the peroneus longus and peroneus brevis). The patient sustained a sprain of the ankle-joint and rupture of the annular ligament. When the ligament ruptured, forcible flexion of the foot would displace these tendons. They can now be displaced so as to make distinct crepitus. You can get a slipping motion of the tendon by pushing it out of place forwards on the malleolus and pushing it back again.

Probably in a thousand cases of sprained ankle you would not see another such case as this. There is one thing to be done at this time, that is, pressure by an elastic band or pad, so as to bring direct pressure below the border of the malleolus, producing as little irritation as possible at the attachment of the annular ligament. If, in ten days or two weeks there is no union of the tendon, it will be well to pass a needle in and inject iodoform emulsion precisely as we would in the case of a joint. We might cut down and sew the tendon fast so that it could not move. It is barely possible that we might even at this late date, as the injury was received some three months since, find the ends of the annular ligament and unite them by sutures, but I am inclined to apply direct pressure, if that should fail then the injection of iodoform emulsion, and after that, if necessary, cut down over the malleolus and sew together the ligament.

HYDRARTHROSIS.

WE have before us a case of fluid in the knee-joint. It is not exactly a case of hydrops articulorum, where we have excessive fluid in the joint; but we have a good deal of surplus fluid along the side of the quadriceps tendon. The child is of extremely healthy appearance, and I doubt if it is a case of tubercular synovitis, although we might so suppose. You notice the swelling extends both above and below the patella, showing that the synovial sac is the tissue which retains the fluid. If it were a bursa it would remain the same on flexion of the joint; but you notice on flexion of the joint the character of the swelling changes if I bend the knee. You see it changes materially, it is not so in a bursa. As this overproduction of synovia indicates disease of the membrane, I have introduced trocar and canula into the joint, and shall now inject it with iodoform emulsion.

SPRAIN OF FOOT.

THIS man has a contusion of the foot, and if he had applied hot fomentations to it it would doubtless have been well now and would not have progressed to the stage of exudation. He should at this stage have a compress or elastic bandage applied to it to diminish the exudate and hasten its absorption. These contusions should be treated by hot continuous fomentations, and unless they are very severe, involving sometimes the crushing of bones, they will disappear very quickly indeed, much faster than with any other mode of treatment with which I am familiar. The treatment must be continuous; intermittent applications are worse than none, but when the affections arrive at a chronic stage, where there

is still infiltration of the tissues, there is nothing like elastic compression to reduce it. This man must not walk on his foot, or let it hang down, for several days.

SPRAINED ANKLE WITH RUPTURED LIGAMENTS.

THE history of this case is simply, that in jumping, the patient turned her foot on the inside. There is a little puffiness about the ankle and some pain. In my judgment it has been a sprained ankle with rupture possibly of the ligaments that extend from the fibular joint to the astragalus and bones of the foot. It should be supported with either a starch bandage or some other form of immovable dressing until the torn ligaments have had time to be restored. It should be held in position at the same time and a plaster cast applied.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, SEPTEMBER 5, 1892.

THE PRESIDENT *pro tempore*, ANGUS MCLEAN, M. D., IN THE CHAIR.

DISCUSSION OF PAPERS.

A paper entitled "A Foreign Body in the Ear," was read by DR. WILLIAM LOCKHART.

DR. L. E. MAIRE: This is an important subject. In relation to other aural affections it stands in the relation of one to one hundred. A foreign body in the ear does not usually set up so much irritation as in the nasal cavities. The great point in the treatment of these affections is to use no violence. Cerumen is easily removed by syringing. It is always well when syringing to change the consistence and position of the foreign body if possible. Sometimes a little time will produce the desired change without any further interference, and then it can be easily syringed out. There are cases on record where the auricle has had to be dissected up before the foreign body could be removed. The cerumen is found to be poisonous to insects' life.

DR. R. W. GILLMAN: Always use the syringe before resorting to any other means of removal. The syringe is always the safest method to employ and the fountain syringe is the best one to use. The stream should be directed not directly against the foreign body but between it and the walls of the auditory canal. There is, as a rule, no danger in leaving a foreign body a little while in the ear. The danger usually is not in leaving the foreign body in the ear, but it is in injuring the parts in its removal.

DR. NOYES: DR. LOCKHART'S paper is important and interesting because it shows how very important it is for the general practitioner to examine the ears of all his patients. I have had to remove all kinds of foreign bodies from the ear. Care should always be taken even in the use of the syringe. Some foreign bodies can be easily removed by the syringe, others are difficult to reach by any contrivance known to the modern aurist. I will recite to you a case in point. A young lady broke the head of a bone crochet-needle in her ear, and after much

difficulty I located it in the lower part of the auditory canal. Here was a small, perfectly round, smooth and heavy foreign body in the ear, syringing would not dislodge it. It could not be grasped by any forceps that I could apply to it and I was at my wits' ends. I finally used Critchett's spoon and rolling the head on its axis finally rolled it out. Fine bird-shot is difficult to remove as it is not easily affected by water and has to be scooped out carefully. Spalding's glue on a camel's hair brush has been used.

DR. JOHN L. IRWIN: I well remember a case in point which I saw in PROFESSOR POLITZER'S clinic whose chief symptom was a severe and persistent cough. Impacted cerumen was found in the ear and upon its removal all symptoms of cough and such disturbance disappeared completely.

DR. J. B. NEWMAN: I am very much interested in the paper and the discussion as they show the great importance of thoroughly examining every part of a man when he presents himself suffering from any kind of trouble. The little girl whose case is detailed in the paper might easily have died had her trouble not been accurately diagnosed and properly treated by DR. LOCKHART. The largest insect I have ever seen in an ear was a grasshopper, and it was a large one, too, and caused great pain. The syringe sometimes fails to do the work and other means must then be resorted to, as in the instance of a little girl who put a bean in her ear, it was found impossible to remove it by syringing, and chloroform had to be administered when it was very readily removed without much if any manipulation. Chloroform seemed to relax the parts and the bean practically fell out. In another case the foreign body was removed by a sharp pointed probe. Chloroform is of very great assistance in all these cases of impacted foreign bodies in any of the cavities.

PREVAILING DISEASES.

DR. J. FLINTERMANN: I wish to report the following case: The patient, a boy, sixteen years old, was in the fourth week of typhoid fever when I was called to see him. He had recently lost very large quantities of bright red arterial blood by the bowels, and contrary to my expectation he had a very high temperature. The bowels were discharging the blood in a stream. He had been treated by a quack who had given him one-half ounce of castor oil and one drachm of turpentine. I succeeded in checking the hæmorrhage for twenty-four hours, but it recurred, and notwithstanding the benefit of a consultation with DR. A. W. IMRIE, the patient died. A question which has presented itself to me is, Did the castor oil and turpentine have anything to do with the hæmorrhage? In the treatment of typhoid, hygienic surroundings should be well looked after and warm baths used. No antipyretics are needed unless the temperature rises above 102° Fahrenheit. It would be interesting to know the number of hæmorrhages that occur in typhoid and the percentage of deaths following such hæmorrhages. My own experience is that when hæmorrhages occur freely in typhoid the percentage of deaths is very high, especially when it occurs in the late weeks of the fever.

DR. CARL BONNING: These are cases of great interest always, and in four cases of hæmorrhage I have had recently, occurring in third and fourth week, all got well. The following interesting case I wish to report: A young girl came to my office saying she had had headache and had felt unwell for two days. Temperature 100½°. Next day temperature a little higher. Third day 102½°, and on the

fourth or fifth day she had a profuse arterial hæmorrhage from the bowels. I did not use cold baths and the patient died.

DR. FLINTERMANN: How far had she advanced in the first or second week of the fever?

DR. BONNING: It was the fifth day of her sickness at the outside.

DR. FLINTERMANN: Hæmorrhage from the bowels does not always indicate ulceration of Peyer's patches, but may be due to a malnutrition of the blood-vessels, allowing the blood to oose through. I remember a case twenty years ago in which a very profuse and general bleeding took place and in which the patient made a good recovery. In the case of the boy which is reported above I placed an ice bag on his epigastrium but he could not bear it, so we gave him ice water enemata and extract of hamemelis and tincture of opium internally with hot turpentine stupes to the abdomen. I would make hypodermic injection of iodine solutions in these cases and also salt water enemata. The latter have been strongly recommended in cholera cases.

DR. DOUGLAS: How long since your case occurred, DR. BONNING?

DR. BONNING: About a month ago.

DR. J. B. NEWMAN: Did she have diarrhœa?

DR. BONNING: She had diarrhœa, and died about the twelfth day of her sickness?

DR. DOUGLAS: I thought perhaps it might have been one of those cases of purpura which were occurring earlier in the season.

DR. FLINTERMANN: Did any other members of the family have a similar sickness.

DR. BONNING: No. Her father died of consumption.

DR. J. B. NEWMAN: Was it a sthenic or asthenic case?

DR. BONNING: Asthenic—pale, anæmic.

DR. ANDERSON: Had she menstruated recently?

DR. BONNING: I do not know.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, SEPTEMBER 12, 1892.

THE PRESIDENT *pro tempore*, G. E. FROTHINGHAM, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. H. O. WALKER presented the following specimens with reports of cases: (1) Calculus weighing about two ounces, removed by the supra-pubic method. The operation was followed by the usual unpleasant symptoms incident to the method of operation, namely, continuous flowing of urine over the skin of the abdomen and consequent excoriation. I attempted to remove the calculus by crushing but failed to do so, so resorted to the supra-pubic method. The patient made a quick and uninterrupted recovery. (2) Young man, aged thirty-eight, had history of stone for two years. I crushed and rapidly evacuated the stone. The patient did well and left the hospital cured at the end of the fifth day. (3) This patient had had a history of stone for six months. I crushed and evacuated the stone on Wednesday and he left the hospital on Friday—well. (4) This is a hernial sac. The hernia was of years standing. The rupture was

nearly as large as a child's head and it could be easily reduced but no truss would keep it in place. So I dissected it out and removed the sac. I used kangaroo tendon for the deep and buried sutures and silkworm gut for the superficial ones. The patient did well, making a quick and perfect recovery. (5) A case of femoral hernia in a women sixty-seven years of age. She had been vomiting ten days when I saw her and I operated immediately. Upon cutting down to the seat of the trouble this enlarged gland was exposed, which when carefully dissected out revealed the imprisoned intestine. Circular enterorrhaphy was performed but the patient never rallied and died that night. (6) Man, aged ninety-seven, who gave the following history: Early in the winter he had a great deal of pain in the left iliac region. He had frequent evacuations of blood and pus. I made a careful examination of the abdominal cavity and found a tumor. There was evidently also intestinal obstruction more or less complete, as there had been but little fæcal matter passed for many days. He was tympanitic. An exploratory operation was advised and consented to by him. The intestine was found almost completely closed up and circular enterorrhaphy was performed forthwith. He died from septic infection in forty-eight hours. (7) This hard, enlarged testicle had been growing and giving trouble for some time. It was looked upon as malignant and removed. It is undoubtedly sarcomatous. Recovery. (8) This specimen—including the scapula part of the clavicle and upper end of the human shoulder-joint and soft parts adjacent thereto—was recently removed from a man thirty-eight years old, who had had a great deal of pain in left shoulder and had received much treatment at the hands of various physicians for rheumatism. In February last an enlargement was detected which gradually increased with aggravation of all the symptoms. It was decided to remove all these affected parts. This was done. Patient doing well. (9) Uterus and uterine appendages removed from a patient forty-two years old who had had uterine trouble with frequent hæmorrhages for eleven years. Recovery.

A DISCUSSION ON ASIATIC CHOLERA.

DR. DONALD MACLEAN: When I left Great Britain two weeks ago last Thursday, not very much was being said about cholera. We were, therefore, very much surprised, upon our arrival in New York harbor, at being ordered into quarantine. Our ship having had a clean bill of health, no sickness of any kind nor deaths during the voyage, we were detained but a very few hours. I have, however, since learned that three passengers who were to have sailed on our ship were taken ill and died of cholera in Glasgow three days after we sailed, showing what a narrow escape we had had. The question which most interests us is, What are our chances of an epidemic here this year or next? I do not think that we are liable to be attacked this fall. This may be said, however, since the last epidemic the true germ character of the disease is well established, and it would seem that a strict quarantine would keep the disease out of this country. It is also clear that if it gains access to this country it must do so by being carried in by infected persons or by persons who have been in contact with infected persons. We now know so much of the true nature of the disease that we can fight it to advantage. Prevention in this disease, more than in any other, is the important mode of attacking it. It is very much easier to prevent than it is to cure.

DR. PETER KLEIN: I came here to listen to the present status of the knowl-

edge of cholera, not to give my own experience gained in the epidemics of 1834, 1849, and 1854. My last experience was in 1854. Since then many theories have sprung up, but in an actual epidemic I do not know how effectual they would be. In 1834 I saw many cases of cholera and nursed them day and night, observing carefully their symptoms. My treatment is: (1) Stimulants; (2) narcotics and other remedies to meet the peculiarities of different cases. The history of cholera cases vary greatly in their onset, course, duration and complications. Control the vomiting and purging, relieve the muscular cramps and you have your patient cured if you can get the liver to act. There is no one single line of treatment to be laid down, every case must be studied separately and treated individually.

DR. CHITTICK: Judging from its physiological action nitroglycerine should be a good remedy in cholera. I have observed recently a good many epidemics whose source could be traced only to our water supply.

DR. J. H. CARSTENS: In the present state of our knowledge we should be able to devise means for preventing cholera gaining access to our country. It is a bacillus disease. We should strenuously and heartily support the health officers and the board of health in their efforts to protect the community from cholera. No doubt some must suffer in this quarantine but the few must suffer for the good of the many, We are treating this disease symptomatically. What we most want is a remedy that will surely and quickly kill the germ. A most important preventive is a good healthy gastric juice. Hypodermic medication seems to offer the best chances of success.

DR. PETER KLEIN: Germs there are, but cholera is essentially a filth disease. If you can remove or avoid the filth, cholera will never bother you. Even in an epidemic the disease discriminates in favor of the cleanly and it very seldom attacks the first-class passengers on a ship.

DR. JENNINGS: The question of our water supply is an important one. Lake Saint Clair receives the refuse from the towns and villages along Saint Clair river and the western bank of the lake. Ships passing up and down the river also dump their garbage near the in-take. From all these sources we are likely to get some infection. When our water is dirty and roily it should be submitted to a biological analysis.

DR. HITCHCOCK: I have here a book showing all the details of the epidemic of 1875. It was introduced through New Orleans and spread up the Mississippi and its tributaries. The northern states were not affected.

DR. HARTZ: In Germany and Paris large doses of salol have been used with success. Thirty grains for first dose and fifteen grains every half-hour until five doses have been taken.

DR. H. O. WALKER: Our best remedy is prophylaxis. All the varied remedies which have been recommended are of a germicidal nature. Those physicians who have had most experience with Asiatic cholera do not lay much stress upon any one particular remedy. Our federal, state and city governments are doing all they can to support the efforts of the health officers and health boards throughout the country and they should be properly supported. Cholera is not a filth disease, but the germ revels and multiplies in filth. The water supply of our city is an important thing, and what DR. JENNINGS says about its pollution is a fact.

DR. J. B. NEWMAN: Before we have cholera here it must be introduced from without. In Asia cholera is endemic in the filthy towns of that continent, but in Europe, America and Africa it is not endemic. In the treatment the bowels and stomach should be flushed out with hot water or a salt or soda solution. Internally, solid opium in a capsule if the bowels be most affected. All the dejecta should be disinfected. The germs may travel either by the water or through the air.

DR. J. H. CARSTENS: I take issue with DR. JENNINGS relative to the water supply of Detroit. The great volume of pure, clean water which sweeps by our shores quickly destroys all trace of sewage. You cannot find any trace of Detroit's sewage at the mouth of the Rouge. If the typhoid which occurs in Detroit were due to the water supply we would have far more of it than we do, besides almost every case of typhoid which occurs in the city can be traced to a school residence in the country where they drank from some dirty well or were in contact with some other case. The present in-take is at the deepest and best part of the lake for it to be situated. When the water is roily it is because there is clay mixed with it. Organic matter has never been found in Detroit's water.

DR. H. O. WALKER: Detroit's death-rate is very high. The water is contaminated by the inlets notwithstanding its great volume.

DR. A. E. CARRIER: The volume of water has not everything to do with the question. There is more excrementitous matter at the bottom of the lake because the current is less there. It settles and is taken in by the pipes. Horses and other dead animals have been found at the inlet supplying an abundance of animal organic matter. The condition of the water supply is not everything, the sewers and plumbing must be perfect also, and their imperfection often accounts for much trouble. As a layman I have had experience with cholera. I had it myself in 1854, and my impression is that you could do but little toward flushing out the alimentary canal when nature is firing the contents of the canal out both ends as quickly and as often as she can.

DR. ANDERSON: The Hudson river is greatly contaminated by the populous river banks. Troy contaminates Albany's water supply. The mortality of Albany is very high and there is a great deal of typhoid fever there. The idea that water in large bulk and flowing purifies itself may be true chemically but it is not true biologically.

DR. W. R. CHITTICK: In many of the families in which I have had epidemics of bowel trouble the plumbing and sewers have been found perfect, showing that they could not have been responsible. In one institution sixteen cases occurred. If we have our plumbing and traps in perfect order and an epidemic still continues it must have been due to something else. In many instances I have ordered my patients to filter and boil their drinking water. If it is clay that makes our water filthy, we do not want that kind of clay, and we do not want organic matter of any kind. In Saint Mary's and the Marine hospital we have had true typhoid fever. All these patients have in my opinion been drinking impure water.

DR. CHAS. DOUGLAS: The treatment of cholera, as it has been spoken of to-night, has been almost exclusively symptomatic. Flushing out the alimentary canal is not very practicable in these cases. Nature's efforts are in the direction of throwing off the poison and the improvement of the stools as an

indication of the improved condition of the patient tallies with our experience in cholera morbus. That little streams can be contaminated there is no doubt, but in our case, taking into consideration the great volume of the water and the fact that our typhoid epidemics occur at about the same time of the year irrespective of the early or late opening or closing of navigation, we cannot but think that the latter has but little to do with the epidemic. We must admit that the water does become contaminated to some extent, but judging from the fact that our epidemics are not growing worse we could say that our situation as to the water supply is not getting more unfavorable.

DR. HEADLY WILLIAMSON: Prophylaxis is undoubtedly very important in our consideration of this subject, but we should also know what to do should an epidemic actually arrive. Looking at the physiological action of opium one would say that it is contra-indicated in cholera. Nature is trying her best to throw off a poison by the bowels and stomach and the physiological action of opium is to seal up these channels and imprison the poison in the economy. Hypodermic medication and the flushing of the bowels are indicated.

DR. TILTON: The most important question is that of prevention—quarantine, good hygiene, etc. All water should be boiled before being used.

DR. G. E. FROTHINGHAM: Prevention is the all-important thing in cholera. Sulphuric acid is a good remedy. I agree with DR. JENNINGS as to the question of water. It should be thoroughly examined biologically. Detroit is badly off from a sanitary stand-point. Bad, dirty, rotten, and filthy pavements also play an important role in the sick reports of our city. The world is breathing the foul odors arising from these pavements and drinking the contaminated water from the Saint Clair settling basin and is not in the best condition to resist an epidemic of cholera.

DR. H. J. HARTZ:—All bacteriologists recommend large volume of water for the destruction of diseased germs and I think we have that condition in Detroit's water supply.

DON. M. CAMPBELL, M. D., Secretary.

EDITORIAL ARTICLES.

SEASICKNESS AS A VISUAL REFLEX.

IT would be difficult to examine or even enumerate all the various theories that have been advanced in explanation of the nature of that bugbear of ocean travellers, the dreaded *mal de mer*. A theory, however, which has recently been advanced seems deserving of some consideration from the fact that it is supported by an array of experimental evidence, the significance of which is certainly striking.

The personal experiences of Dr. Graily Hewitt, of London, have led him to propound the doctrine that seasickness is primarily due to complex visual disturbances arising out of the presence of perpetually moving objects. Dr. Hewitt relates that while staying at a house in the country he one day, while brushing his hair before a large wardrobe-door mirror, felt the squeamish and uncomfortable sensations which everyone recognizes as heralding an attack of seasickness. The cause was not at first apparent, but closer observation revealed that the

mirror, which was delicately hung, was moving all the time. This led to a series of experiments with a view of determining the precise part played by the visual apparatus in the production of seasickness.

It was then found that by placing an individual before an oscillating mirror a feeling of dizziness was produced in nearly every case tested. It was also found that by further complicating the visual movements by placing the individual in a swing before the oscillating mirror very decided symptoms of seasickness ensued. In those who were good sailors and not in the habit of suffering from seasickness no particular effect occurred, but in those in the habit of suffering from seasickness marked discomfort was produced within ten or fifteen minutes after the swing and mirror were set in motion.

The parallelism between the action of the swing and mirror, and the conditions prevailing on board ship, is sufficiently obvious to suggest that the means of preventing the one might indicate the remedy for disturbances arising out of the other. Dr. Hewitt, therefore, recommended that those subject to severe sickness be temporarily blindfolded. Those who suffered but slightly he advised should fix the eyes upon some fixed object, as a cloud. Dr. Hewitt's experiments thus far have been as successful in preventing nausea as in producing it. He has again and again found that the simple expedient of blindfolding has enabled a patient to make sea voyages in comfort. While disclaiming the idea that visual disturbances are the sole cause of seasickness Dr. Hewitt is, nevertheless, prone to attribute to them an important part in the etiology of this troublesome malady.

THE TREATMENT OF CHOLERA.

Now that the excitement attending the recent outbreak of cholera has somewhat subsided, we can profitably begin to apply the lessons of the epidemic. The paucity of our therapeutical resources for dealing with this disease, has not been much diminished by recent experience. Some progress, however, has been achieved in preventive treatment, and the success which has attended the anticholeraic inoculations of Brieger, Kitasato, Wasserman, and Haffkine, certainly indicates that some practical method of immunization will be reached in the near future. The medicinal treatment of those actually stricken, however, appears to have sustained but little amplification during the recent epidemic, and reliance has been placed for the most part on those methods which have been hitherto most successful.

Recent experience would indicate that while beneficial results undoubtedly follow the administration of such intestinal antiseptics as salol and lysol, greater reliance can be accorded the line of treatment advocated by Cantini, of Naples, who has recounted his experience based on several epidemics. This treatment essentially consists in the administration of tannin clysters. The indications for treatment in cholera are to limit the growth of the bacilli in the intestine, as by some intestinal antiseptic, to render the poison inert, as by the administration of some antidote, to eliminate the already absorbed poison and to counteract the thickening of the blood due to the loss of serum. The two first of these indications Cantini deems best met by the repeated administration of hot rectal injections of tannic acid, water, and laudanum. From prolonged experience the

author of this treatment maintains that the resistance of the ileo-cæcal valve can be overcome and the fluid find its way into the small intestine, thus being a true enteroclysis. The author gives statistics which go to show that if this treatment be adopted in the early stages of cholera diarrhœa, nearly every case recovers. The tannin increases the activity of the intestinal tract, kills the bacilli, and lessens their toxic effects, while the large quantity of water counteracts the depletion occurring in the fluid elements of the blood.

The highly favorable statistics which are said to result from this line of action suggest that it should be borne in mind against coming emergencies.

EDITORIAL BREVITIES.

THE ANTI-VIVISECTION AGITATION.

THE medical profession in America will probably soon have to encounter the same sensational agitation against scientific research as our confrères in England. The journal of the New York society for the prevention of cruelty to animals is attributing the same inhumanity to American physicians as the English clergy did to the profession abroad. At the church congress recently held in Folkestone a tournament took place between the two professions on the question as to whether the interests of mankind required experiments on living animals. Dr. Wilks and Mr. Victor Horsley vigorously defended vivisection. Bishop Barry represented the theologians. The whole debate naturally swerved upon ethical distinctions, between utilitarian and sentimental ideas of morality. Those who deplored that the difficulties imposed upon experimentation had probably deprived them of discovering the antidote to scarlet fever, made little impression upon those who held that the prolongation of human life was only a subsidiary affair in matters of morality.

THE EXTIRPATION OF ANEURISMS.

EXTIRPATION of aneurisms promises to become a recognized surgical procedure. In forty cases of aneurism reported by Kuebler in *Annals of Surgery*, thirty-nine of the forty cases were successfully treated by extirpation. Two methods of performing the operation prevailed, one by incising the sac previous to extirpation and ligature of the vessels, and a second in which the sac is extirpated without previous incision. Hæmorrhage and gangrene, the two principle dangers in any treatment of aneurisms, did not complicate any of these forty cases and extirpation in this respect is pronounced less dangerous than ligation.

CŒLIOTOMY.

IN a letter received from Dr. R. P. Harris, of Philadelphia, the medical press and medical profession are urged to discard the use of the word laparotomy in favor of cœliotomy. It is shown that the word *belly* occurs several times in the new testament and each time the Greek original gives *koilia*. The *lapara*, it is further urged, did not mean *belly* at all but meant *hollow*, and was applied by the Greek anatomists to the hollow above the flank, the hollow of the waist. Mr. Grieg Smith, in his book on abdominal surgery, has adopted cœliotomy, and there appears a general disposition to adopt the new term. As there is no doubt about the correctness of the term, we shall ourselves be glad to use cœliotomy, in place of the misapplied word, laparotomy.

MEDICAL NEWS.

DR. A. N. COLLINS, of Detroit, was married October 13.

ONE HUNDRED AND EIGHTY THOUSAND suicides occur every year.

THE incubation period of cholera varies from one to fifteen days and averages two to five days.

DR. JOHN AVERY, of Greenville, president of the state board of health, is a candidate for congress.

ACCORDING to Sir Lyon Playfair, the entire nitrogenous material of the body is changed every six weeks.

THE next International medical congress will convene at Rome, September 24, 1893, and close October 1.

AN enterprising novelist has taken time by the forelock and written a story called "Saved by Quarantine."

MORPHINE soirées are said by a London daily paper to be becoming recognized institutions in certain circles of Parisian life.

KRAFFT-EBING has been unanimously recommended to succeed Meynert, deceased, in the chair of psychiatry in the university of Vienna.

DR. HOBART A. HARE, of Philadelphia, is making a research into the action of chloroform on behalf of the government of the Nizam of Hyderabad.

MIGNONETTE FOR TAPEWORM.—A decoction of the flowers of the mignonette drank fasting is a Russian remedy for tapeworm said to be very effective.

DR. W. A. WILE, of Danbury, Connecticut, the editor of the *New England Medical Monthly*, has been elected surgeon-general of the grand army of the republic.

COMPULSORY PHYSICAL CULTURE.—Ohio has enacted a law making it obligatory on school boards to provide for the proper teaching of calisthenics in all the common schools.

WIDOWS IN INDIA.—The marriage customs of India make widows plentiful. There are estimated to be twenty millions of them, eighty thousand being under nine years of age.

DEATH TO FLIES.—The police authorities of a town in Prussia have ordered the citizens to exert themselves in killing all flies within their houses, as they tend to the spread of cholera.

DR. EDWARD T. REICHERT, of Philadelphia, the editor of the *Medical and Surgical Reporter*, has discontinued his connection with that paper, owing to the increasing pressure of other work.

THE PAN-AMERICAN MEDICAL CONGRESS.—Dr. Geo. Duffield, of Detroit, has been appointed an honorary chairman of the section on pathology by the national committee on permanent organization.

A SAINT LOUIS physician reports that there are no less than twenty thousand persons in that city who habitually practice hypodermic injections on themselves, the great majority being women of the well-to-do classes.

A PRESCRIPTION belongs to the patient. In a recent case tried in Detroit the court rendered this decision. Testimony tending to show that druggists regard the prescription as their property was excluded.

DR. H. W. LONGYEAR, of Detroit, has been elected a second vice-president of the American association of obstetricians and gynecologists. It is thought the next meeting of the association will be held in Detroit.

DR. CHARLES E. SAJOUS, of Philadelphia, has been appointed a knight of the legion of honor of France by President Carnot, for his services to the French colony and to science, as an American of French descent.

THERE are six thousand railroad surgeons in this country. Any attempt of the American medical association to discipline so large a number of men practicing under contract would fail, so the inevitable has been recognized.

THE health department of Cincinnati is contemplating the enactment of a medical practice law for that city. The passage of a bill to regulate the practice of medicine in the state was defeated by the Ohio legislature last winter.

A LONDON chemist has analysed Keeley's cure and finds its composition water thirty-one and sixty-one one hundredths per cent., sugar six per cent., a trace of mineral salts and twenty-seven and fifty-five one hundredths per cent. of strong alcohol.

A DIPLOMA UNDER DIFFICULTIES.—A lady in Saint Louis has taken her M. D. degree under difficulties. A few weeks before examination she presented her husband with a ninth "olive branch" and eleven days after this again took her place in the lecture room.

THE largest lunatic asylum in England has accommodations for twenty-three hundred patients. It is located at Prestwich, and is known as the Lancaster county asylum. The Middlesex asylum, located at Colney Hatch, will accommodate twenty-five hundred patients.

The Canadian medical association elected the following officers at its recent meeting in Ottawa: President Dr. Charles Sheard, of Toronto; secretary, Dr. H. S. Birkett, of Montreal; treasurer, Dr. W. H. B. Aikens, of Toronto. The next meeting will be held in London, next year.

THE WAYNE COUNTY MEDICAL SOCIETY.—The annual meeting of this Society was held October 6. The following were elected officers for the ensuing year: President, Dr. O. S. Armstrong; vice-president, Dr. James Newell; secretary, Dr. E. B. Smith; treasurer, Dr. C. H. Leonard.

A toe is worth four hundred and twenty dollars. This valuation has been fixed by the jury in a case where a workman brought suit to recover ten thousand dollars for the loss of three toes in his employer's machinery. An award of one thousand two hundred and sixty dollars was granted.

A RESOLUTION was recently passed by the comitia of the royal college of physicians of London to the effect "that this college regards the sale and purchase of practices, or the transfer of patients from one physician to another for a pecuniary consideration, among fellows or members of its body, as contrary to the traditions and practices of the college, interfering with the freedom of patients, and derogatory to the position of a physician.

THE CHILDREN'S HOSPITAL, DETROIT.—A generous benefactor, now known to be Mr. Hiram Walker, has given the sum of $125,000 for the purpose of erecting and equipping a new building for this charity. The hospital is doing very excellent work, and will doubtless justify the benevolent aspirations of its present benefactor.

AT its recent meeting, the American orthopedic association elected the following officers for the ensuing year: President, Dr. A. J. Steele, of Saint Louis; vice-presidents, Dr. Samuel Ketch, of New York, and Dr. Arthur J. Gillette, of Saint Paul; secretary, Dr. John Ridlon, of Chicago; treasurer, Dr. A. B. Judson, of New York.

THE Riberi prize of four thousand dollars has been announced by the royal acadamy of medicine at Rome, to be given for the greatest discovery in anatomy, physiology, pathology, or pharmacology, during the period from 1892 to 1896. The essay descriptive of the discovery must be written in Italian, French, or Latin, and must be presented not later than December, 1896.

THE American gynecological society elected the following officers at its recent meeting: President, Dr. Theophilus Parvin, of Philadelphia; vice-presidents, Dr. W. H. Parish,, of Philadelphia, and Dr. W. H. Baker, of Boston; secretary, Dr. H. C. Coe, of New York; treasurer, Dr. Matthew D. Mann, of Buffalo. The next meeting will be held in Philadelphia, on the third Tuesday in May, 1893.

BEWARE OF THE CONFIDENCE MAN.—A man calling himself F. A. Washburn, of Saint Paul, Minnesota, and representing himself the special agent of the Bankers' mutual aid association of Saint Paul, is going about appointing medical examiners. The examiner is requested to take a policy and pay five dollars as quarterly dues in advance. No policy follows, and the appointment is bogus.

THE DETROIT GYNECOLOGICAL SOCIETY.—This society held its annual meeting October 19. The following officers were elected for the forthcoming year: President, Dr. J. H. Carstens; vice-president, Dr. C. H. Leonard; secretary, Dr. W. J. Cree. Dr. C. G. Jennings subsequently entertained the members at a sumptuous banquet, at which many medical orators acquitted themselves with distinction.

THE Bonacossa prize of three hundred and ninety dollars is announced for the best essay on "Epileptic Psychoses—their Etiology and Clinical Characters." The production must have been written subsequent to April 1, 1890, must be in Italian, French, or Latin, and in possession of the president of the academy of medicine of Turin not later than December 31, 1894. The person to whom the award is granted must supply a written copy of the essay to the academy before the money will be paid.

THE graduate of a Michigan educational establishment, and a practitioner of medicine, was called upon to certify to the insanity of one of his patients. His certificate alleges that his patient "Imagines he ones the welth of the State of Michigan & is vry Troubl Some with his neighbors emagenin them to do hime & his family harm keeping them in terror all the time with wakefulnes all night keeping all the family from rest & all the comforts of home." Surely the physician must have some paragraphic lesion himself, casting doubt on his sanity as a practitioner.

THE DETROIT MEDICAL AND LIBRARY ASSOCIATION.—The annual meeting of the association was held in the parlors of the Wayne hotel, Monday, October 3. The secretary's annual report recorded the vast amount of good work the association has accomplished during the past year. The treasurer's report showed the finances to be in a good healthy condition. The retiring president, Dr. G. W. Stoner, entertained the members and numerous guests at a very sumptuous banquet. The following were elected to office for the ensuing year: President, Dr. F. W. Mann; vice-president, Dr. G. A. Frothingham; treasurer, Dr. Angus McLean; secretary, Dr. Don. M. Campbell.

ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.—The American medical temperance association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Michigan, offers the following prizes: (1) One hundred dollars for the best essay "On the Physical Action of Alcohol, Based on Original Research and Experiment." (2) One hundred dollars for the best essay "On the Non-alcoholic Treatment of Disease." These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Connecticut, on or before May 1, 1893. They should be in type-writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wisconsin, in June, 1893, and the successful essays read. These essays will be the property of the association, and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and limited to physicians of this country.

RECENT PUBLICATIONS.

REVIEWS.

CONTRIBUTIONS OF PHYSICIANS TO ENGLISH AND AMERICAN LITERATURE.*

Books dealing with the literary aspects of the medical career are always welcome. The present one is a compilation from American and English authors. The selections do not always appear to us as being felicitous or representative of the writers. However, the book is a very readable one and will be valued highly by those who may possess any feeling for *belles-lettres*.

* By Robert C. Kenner, M. D. Geo. S. Davis, Detroit.

THREE NEW QUIZ-BOOKS: MATERIA MEDICA AND THERAPEUTICS.*—GENITO-URINARY AND VENEREAL DISEASES.*—OBSTETRICS.*

THE large demand for quiz-manuals in recent days has led to a large amount of energy and talent being expended in their production. Messrs. Lea Brothers & Company are now issuing a most excellent series of such books, and now that the medical schools are reassembling it is to be anticipated this series will become exceedingly popular with the student.

The series is edited by Dr. Bern B. Gallaudet, of New York. The numbers now before us are exceedingly well compiled, carefully worded, and amply illustrated, and will furnish the student an effective commentary upon the didactic and clinical teachings of his professors. The demand for the quiz-compend appears to be no transitory one, and as it is here to stay, and while still encouraging the use of larger manuals, it becomes the duty of those interested in medical education to point out the best manuals of the kind now available for students.

* By L. F. Warner, M. D., attending physician, Saint Bartholomew's dispensary, New York. Being Volume V of the Students' Quiz Series. Pocket size: two hundred and twenty-four pages. $1.00. Philadelphia: Lea Brothers & Company, 1892.

* By Charles H. Chetwood, M. D., visiting surgeon, Demilt dispensary, department of surgery and genito-urinary diseases, New York. Being Volume VIII of the Students' Quiz Series. Pocket size: one hundred and seventy-eight pages. $1.00. Philadelphia: Lea Brothers & Company, 1892.

* By Charles W. Hayt, M. D., house physician, Nursery and Children's hospital, New York. Being Volume XI of the Students' Quiz Series. Pocket size: one hundred and ninety pages. $1.00. Philadelphia: Lea Brothers & Company, 1892.

PRINCIPLES OF THEORETICAL CHEMISTRY, WITH SPECIAL REFERENCE TO THE CONSTITUTION OF CHEMICAL COMPOUNDS*.

Dr. Remsen's manual of "Theoretical Chemistry" has won golden opinions at home and abroad. It has been translated into Italian and German and a fourth edition called for in its original tongue. The book is essentially a brief treatise on those facts and speculations that deal with the problem of the constitution of chemical compounds. A very attractive and lucidly written chapter deals with the periodic law of the elements, and we know of no book better arranged for the purpose of imparting clear ideas regarding the fundamental principles of chemistry.

* By Ira Remsen, M. D., Ph. D., professor of chemistry in the Johns Hopkins university, Baltimore. Fourth and thoroughly revised edition. In one handsome royal 12mo volume of three hundred and twenty-five pages. Cloth, $2.00. Philadelphia: Lea Brothers & Company, 1892.

A MANUAL OF ORGANIC MATERIA MEDICA.*

The fifth edition of Maisch's materia medica is an improved form of a book that has been too well-known to all students of pharmacy to need much in the way of introduction. It contains a description of all the essential, physical, histological and chemical characters of the organic drugs. The true understanding of the physiological actions of drugs being based on their properties, a knowledge of these latter is especially necessary. There is little doubt that this book, occupying as it does, such an exceptionally useful position, will continue to be as popular as it has been hitherto.

* By John M. Maisch, Phar. D., professor of materia medica and botany in the Philadelphia college of pharmacy. New (fifth) edition, thoroughly revised. In one very handsome 12mo volume of five hundred and forty-four pages, with two hundred and seventy engravings. Cloth, $3.00. Philadelphia: Lea Brothers & Company, 1892.

TEXT-BOOK OF THE PRINCIPLES AND PRACTICE OF MEDICINE.*

THE west is rapidly becoming a contestant for the honors enjoyed by the east, and to-day we give welcome to an excellent manual of the practice of medicine from the city of Chicago. Dr. Lyman has compiled a complete, comprehensive and very concise volume. His aim has been to secure the greatest possible brevity. Historical and controversial matters have been avoided and the book is such as the student will appreciate who desires to obtain an essential knowledge of his subject. Dr. Lyman's book is arranged on a plan that will commend itself to most medical readers. After dealing with the diseases affecting the external parts of the body the study of internal medicine is commenced by an investigation of the parasitic diseases. This is naturally followed by a consideration of the infective diseases and disorders of the alimentary canal and respiratory organs. Then follow diseases of the blood and of the organs of circulation which lead to degenerations and inflammations. Disorders of nutrition and of the nervous tissues complete the field.

The work is well written and will doubtless find favor with students and practitioners as a modern text-book of medicine.

* By Henry M. Lyman, M. D., professor of the principles and practice of medicine in Rush medical college, Chicago. In one very handsome octavo volume of nine hundred and twenty-six pages, with one hundred and seventy illustrations. Cloth, $4.75; leather, $5.75. Philadelphia: Lea Brothers & Company, 1892.

REFERENCES.

BOOKS AND PAMPHLETS.

"The Treatment of Epilepsy." By Frederick Peterson, M. D., New York. Reprinted from *Buffalo Medical and Surgical Journal.*

Retro-anterograde Amnesia, with Report of Two Cases." By J. T. Eskridge, M. D., Denver, Colorado. Reprinted from *Alienist and Neurologist.*

MEDICAL PROGRESS.

MEDICINE.

ORIGIN AND SEAT OF EPILEPTIC DISTURBANCE.

VICTOR HORSLEY limits his remarks to idiopathic or general epilepsy, convulsions of children, reflex epilepsy, etc., as distinguished from Jacksonian epilepsy and hystero-epilepsy.

The phenomena which mark an attack (without aura) of this kind are: (1) semi-voluntary movement—for example, rising into a standing posture; (2) change in respiration, inspiratory spasm with cry and commencing asphyxia; (3) in the worst cases with loss of consciousness (instantaneous); (4) muscular spasms (tonic stage); (5) muscular spasms (clonic stage); (6) exhaustion.

Loss of Consciousness.—The observations of Strümpell and the extirpations and experiments of Goltz show that the cerebral hemispheres are the essential regions which contribute to the conscious state. This warrants the assumption that loss of consciousness must be brought about by some agency which abrogates the functional activity of the cortex cerebri. Such agency may be extrinsic (for example, action of a narcotic poison through the circulation on the elements of the nerve centres from the outside so as to paralyze their activity), or intrinsic, as when (for example, in the hypnotic state) suitable stimulation of the optic or auditory (sensory) nerves may very profoundly depress the functional activity of the cortex cerebri. At present the only thing we know that would produce such a condition is, as just stated, a strong afferent excitation. It has been the fashion to attribute the loss of consciousnesss to extrinsic agencies, and the most remarkable assertions have been made as to the ability of the circulation to produce the effect in question. It should be borne in mind that the experiments of Kussmaul and Tenner, upon which so much stress has been laid in this connection, involved not merely anæmia as a cause of the convulsions, but also asphyxia, since the effect of the ligatures was to cut off the nutrition of the respiratory centre. A yet more fundamental criticism which should be applied to these experiments is that the convulsions they evoked are of a quite different type to those of the general or so-called idiopathic epilepsy.

The argument in favor of cortical anæmia drawn from the pallor of the face is shown to be worthless. Experimental results point strongly in the opposite direction. In a large number of epileptic fits induced in monkeys by injecting essence of absinthe, the cortex became hyperæmic. These observations have been confirmed and extended by Todoesky. In a patient of Horsley's, who had an epileptic fit during an operation in which the "motor" area was exposed, this became distinctly hyperæmic during the attack. These facts prove that there is no ground for the gratuitous clinical assumption that the brain is anæmic.

Does the agency which produces the epileptic fit strike the whole of the neural axis at once, or only one part of it?

When absinthe is injected after complete division of the spinal cord no fit can be evoked from the centres below the section, thus proving that although in the complete attack the spinal nerve centres are being used at least as conductors, if not participators, they, nevertheless, have no power when irritated by absinthe of initiating the convulsion, and it becomes, therefore, a definite conclusion that somewhere in the encephalon must be the starting-point of the fit. In which part of the encephalon cannot at present be answered positively. But we are justified in concluding that even if they be not the starting-point of the convulsions, the hemispheres, that is, their cortical mantle, are affected very early in the convulsion, and in may cases where loss of consciousness and, consequently, the fall, are the initial symptoms it is clear that the epileptogenous agent, if it does not commence its action therein, at least attacks the cortex at the same time as it does other parts.

Next, as regards the changes in respiration and phonation, it is to be remembered that both these functions are now known to have extensive cortical representation, so that their disturbance is not necessarily an indication of changes in the medulla oblongata.

Muscular Spasms.—The order of events, as far as the muscles are concerned,

is tonus, followed by clonus. The question arises: What nerve centres in the neural axis are capable, when excited by any kind of agency, of producing this definite effect of tonus followed by clonus? In the vast majority of instances faradic stimulation of the spinal cord or bulb produces in the main a tetanic contraction, and in the vast majority of cases it is not followed, when the excitation is left off, by any clonic stage. On the authority of all observers the nerve centres, in the basal ganglia, the mid-brain, and the cerebellum may also be excluded. On the other hand, electrical excitation of the cortex in the so-called motor region has, in the hands of most observers, evoked this characteristic tonus followed by clonus. A knowledge of the kind of impulses which come down along the spinal cord during a fit is, however, still required to enable one to determine whether the tonus-clonus sequence is due to the encephalic centres, or whether the spinal centres are not exerting their influence as well. By recording the "action currents" by means of an electrometer, Gotch and Horsley have shown that the impulses which the cortex delivers and sends down the cord are of the characteristic form of tonus followed by clonus, thus proving that the "motor" part of the epileptic disturbance is seated in the cortex of the hemispheres. To sum up: Whatever be the point which the epileptogenous agency first attacks, we must conclude that the principal seat of the disturbance of a general or idiopathic fit must be the cerebral hemispheres, and especially their cortical mantle. Further, that the condition of the cortex during an attack is one of congestion and not anæmia; and, finally, that in all probability this portion of the encephalon is actually the place of origin of the disturbance.—*British Medical Journal.—American Journal of Medical Sciences.*

THE PATIENT'S CONSENT ALONE NECESSARY TO THE PERFORMANCE OF A SURGICAL OPERATION.

If, after consultation, they deem it necessary, surgeons are justified in performing a surgical operation on a married woman with her consent, whether her husband consents or not. And in an action for damages for alleged unskillfulness and negligence in performing such operation, which is alleged to have caused her death, the wife's consent to the particular operation performed will be presumed from her voluntary submission to it, and the burden is on the plaintiff to prove the contrary. And where the disease resulting in death was caused by the operation the surgeons are not liable if they performed the operation with the wife's consent, in a careful and skillful manner, in the belief that it was proper to be performed.

In the case in which these points were decided, it appears from the evidence at the trial that the deceased had been afflicted by the formation of a lump in her right breast. It was supposed at first to be a benign tumor, but was afterwards found to be a cancer. The defendant, a regular physician, was consulted, and advised a surgical operation. A day was appointed for the performance of the operation, and the defendant and another physician were present and performed the operation by cutting off the entire right breast. The operation was performed about June 1, and the death occurred on December 5 following, and was not attributed with any degree of certainty to the results of the surgical operation. Some portions of the evidence tend to prove that the wound caused

by the surgical instruments was entirely healed, and the death was produced by tubercular meningitis. The husband of the deceased, who was the plaintiff, relied upon the fact that, although he expressed a willingness that there should be an operation for a tumor, he did not consent to the excision of the cancer. He says that he told the physician that if the formation in the breast was a cancer he objected to its removal.

The jury returned a verdict for the defendant physician, and, on appeal the supreme court, on the question of the husband's consent, said: "His own testimony shows that he assisted the physicians in preparing to perform the operation, and, though not in the room where it was performed, was near at hand. He says that he supposed the medical men were operating for a tumor, and that he would not have consented to an operation for a cancer. There is evidence from which the jury might infer that the patient knew that the formation in her breast was a cancer. When the doctors came to the house she had already prepared herself to undergo the operation. If she consented to the operation the doctors were justified in performing it, if, after consultation, they deemed it necessary for the preservation and prolongation of the patient's life. Surely the law does not authorize the husband to say to his wife, 'You shall die of the cancer; you cannot be cured, and a surgical operation, affording only temporary relief, will result in expense.' The husband had no right to withhold from his wife the medical assistance which her case might require.

"The consent of the wife, not that of the husband, was necessary. The professional men whom she called in and consulted, being possessed of skill and scientific knowledge, were the proper persons to determine what ought to be done. They could not, of course, compel her to submit to an operation, but if she voluntarily submitted to its performance her consent will be presumed, unless she was the victim of a false and fraudulent misrepresentation, which is a material fact to be established by proof. Indeed, the party who allows a surgical operation to be performed is presumed to have employed the surgeon for that particular purpose."

And continuing, the court says:

"It was the duty of the professional men to exercise ordinary care and skill, and, this being a duty imposed by law, it will be presumed that the operation was carefully and skillfully performed, in the absence of proof to the contrary. As all persons are presumed to have duly performed any duty imposed upon them, negligence cannot be presumed, but must be affirmatively proved. This principle is especially applicable in suits against physicians and surgeons for injuries sustained by reason of alleged unskillful and careless treatment. The burden of proof is on the plaintiff to show a want of proper knowledge and skill." —*International Medical Magazine.*

HYSTERICAL FEVER.

THE varied and peculiar manifestations of hysteria always form an interesting study, and as they are apt to prove most discouraging to the attending physician, any light on the subject is acceptable.

Hysterical fever has for some time been a recognized form of the disease. This fever is manifest either as a continued or paroxysmal fever. The continued

fever is analogous to the continued sensitive disturbance, such as anæsthesia; while the paroxysmal form corresponds to the more transient anæsthesia and hysterical convulsions.

Naturally both forms of hysterical fever can follow each other in a complicated form, as well as in a series of lesser hysterical attacks, interrupted by more severe attacks; just so it is possible that during the continued hysterical fever, attacks of paroxysmal fever may also occur. Under the nomenclature of true hysterical fever, only such cases should be included where the temperature does not exceed 38.50° centigrade.

Dr. Arthur Sarbó, in the *Deutsche Medizinal Zeitung*, describes a well developed case of hysterical fever which occurred at the psychiatric clinic in Budapest.

The patient, who was a girl sixteen years old, fell ill nine months prior to her admission to the hospital. The disease originated in this way, the patient had suddenly been brought in sight of a corpse, without having been prepared for the shock. She immediately fainted. She then became cyanotic, and had severe clonic convulsions, which, however, ceased when consciousness returned, but recurred again once or twice a week. The father of the patient was a hard drinker, and a relative on the father's side was neurotic.

The condition at the time of admission was as follows: The patient was a well-nourished woman; the pupils were large, the right slightly the larger, but both reacted well. The sight of the patient was limited, and the right ear rather deaf. On the right side of the nose the patient could not detect the odor of acetic acid. On the right side of the face as well of the body there was a complete anæsthesia of the skin, and also an absence of any sensation of temperature. On the right side no active movements could be made, and the temperature of this side of the body was less than that of the right. No other abnormalities could be found.

During her one month's stay in the hospital, the patient suffered occasionally from dizziness and constipation. Now followed the stage of fever. On the morning of November 12 menstruation began, the patient having a temperature of 38.9° centigrade, and immediately after was seized with an hystero-epileptic attack, lasting twenty-three minutes. The following day the temperature was 38.5° centigrade, and on the next two days it was 39.1° centigrade.

For two weeks these attacks continued in spite of the liberal administration of quinine, antipyrin, phenacetin, etc. No enlargement of the spleen could be felt at any time; during the fever both pulse and respiration became accelerated.

Regarding the etiology of hysterical fever, Chau-Neau is of the opinion that it occurs either primarily, without any assignable cause, or else secondarily, as a reaction of the strained nervous system.

According to Sarbó, hysterical fever is characterized by the very fact that there can be no reasonable cause found for its presence. The manner of the beginning of hysterical fever, its sudden appearance and disappearance, and its attitude toward antipyretics in general, make its diagnosis comparatively easy. Another symptom, although not always present, is a very high pulse, and but little rise of temperature. The therapy should be directed toward the disease rather than the fever. Symptomatically, antipyretics may be given, but they accomplish little or no good. The expectant treatment is about the best after all. If the fever lasts for several weeks general stimulants should be given.—*Medical and Surgical Reporter.*

SURGERY.

MODERN BRAIN SURGERY.

KERCHOFF (*Therapeutische Monatshefte*, June, 1892), in describing the various conditions of the brain requiring operative interference, mentions two forms of brain abscesses—

(1) Those resulting from head injuries, or, more especially, the result of suppurating ear-trouble.

(2) Those of metastatic origin, as in pyæmia. These abscesses are found generally to follow extensive suppuration of the lungs.

In each of these abscesses three groups of symptoms are described—

(1) Symptoms depending on the formation of pus, such as fever, etc.

(2) Symptoms dependent upon the increase of intracranial pressure.

(3) Pressure symptoms, which vary according to the position of the abscess.

Operation is not recommended in these cases unless an absolute diagnosis and location can be made.

As regards tumors, few good results have been obtained. Only in the case of an encysted growth should an attempt be made to extirpate. Infiltrating tumors, such as tubercular, where it would be impossible to remove all the caseating masses, should be allowed to remain without interference.

In epilepsy, operations should be limited to those cases in which some positive local cause is the indication. In the Jacksonian epilepsy the operation should be tried, as sometimes relief may be obtained.

The removing of serous effusions has been performed several times with complete success. It often greatly relieves the intense headache, especially in cases of tubercular disease with effusion.

Puncturing the skull and brain for the relief of chronic hydrocephalus has been performed from the time of Hippocrates, but as yet nothing but temporary relief has been obtained.

Craniectomy for microcephalus is yet so little known that nothing definite can be predicted.

In cases of spontaneous brain hemorrhage, operative measures seem to promise little, because of the inability to localize exactly, and of the difficulty in diagnosticating between a hemorrhage and softening.

Operative measures for relief of headache should only be adopted in those cases where a distinctly localized, obstinate pain exists. In these cases the headache may result from the pressure of a Pacchionian granulation. As regards insanity, no special results have been obtained.—*Therapeutic Gazette.*

THE PATHOLOGY OF URINARY FEVER.

OUR knowledge of the etiology and pathology of that long recognized, but imperfectly understood, disorder called urinary, urethral or catheter fever, has received a number of valuable additions during the last year or two. At the recent meeting of the American association of genito-urinary surgeons, Dr. F. Tilden Brown, of New York, read an instructive paper which places the subject in a much clearer light. According to Velpeau's theory the disease is due to

reabsorption of some of the constituents of fully formed urine, through some traumatic or idiopathic lesion of the bladder or urethra, and this view has recently been defended by Guion. Thanks to the progress made in bacteriology, we are able now to identify the various micro-organisms which are claimed to be the specific cause of the different forms of urinary fever, so that now the vague term, "fully formed urine," is being supplanted by the generic name of some particular microbe or its essential waste product (ptomaine). The ways by which any pathogenic microbe may gain access to the urinary tract are various, in part quite obvious, in part obscure. Chief in point of frequency among the different forms of microbic life which give rise to urinary or systemic sepsis, is the bacterium coli communis, although the urobacillus liquefaciens septicus is regarded of great virulence. Despite the advances in our bacteriological studies of urinary fever, it will not do to go to extremes and attribute the disease solely to the agency of micro-organisms, to the exclusion of other possible, and, occasionally probable, factors. For a long time certain clinical manifestations of the affection have been explained on the basis of the theory of nerve reflex action. Derangements of the urinary organs of functional character follow not infrequently the use of instruments in the urethra or bladder, even without the supervention of traumatism or sepsis. This local derangement may be associated with systematic symptoms, chiefly of a nervous character. It seems best to employ the word "shock," not only for those rare cases of sudden death after urethral instrumentation, but also for every grade of functional disorder affecting the urinary system primarily and the organism secondarily, as distinguished from affections of microbic origin. In view of the highly developed cerebro-spinal, as well as sympathetic nervous system of the genito-urinary tract, and the close sympathy existing between correlated organs, it is quite explicable why a temporary renal disturbance might follow a trifling trauma, inflicted upon a hyperæsthetic urethra. If a functional renal disorder be thus initiated, this might lead to a failure to eliminate physiological waste products (leucomaines), which would give rise to symptoms of general systemic disturbance or poisoning. In this way, without the intervention of micro-organisms, a condition of sepsis might be produced; so that it is quite conceivable that not only the evanescent, but the more continuous types of urinary fever may have their starting point in shock.—*International Journal of Surgery.*

SUPPURATION.

SUPPURATION can be produced either by one of the numerous microbes, whose principal and exclusive quality is pyogenic, or by other agents more virulent, but still accidentally acquiring this quality, or by simple saprophytes. Apparently, the results of recent experimentation go to prove that it may be produced by most of the well-known microbes.

Graevitz and Bary have done the best work in determining whether pus can or cannot be produced by the introduction of aseptic substances into the body without the presence of bacteria. They have proved that in rabbits suppuration without microbes cannot be induced, while in dogs a solution of nitrate of silver or concentrated ammonia will cause abscess. But the most marked result was obtained by the use of terebinthine. This substance and mercury are strongly

pyogenic for dogs, while for some other animals (rabbits, etc.) they are simply phylogenic.

In his normal condition man is not a very favorable medium for pyogenic microbes; for their development the resistance of the tissues must be lessened either in consequence of a traumatism or local alteration, or the general health must be impaired in some way. It is fortunate this is so, since pyogenic microbes are everywhere about us. They are constantly found in the skin, in the mouth and intestines, and while harmless generally, expose us to constant danger. In the course of infectious diseases suppurations often occur and always in localities previously attacked by the microbes. This explains the secondary suppurations in different skin diseases, and in consumption the destruction of the lung allows the pyogenic microbes to add their action to that of Koch's bacillus, so that at the same time the patient may be pyochemical as well as phthisical. In wounds of the skin and sores it is almost impossible to prevent their appearance. In the secretions of wounds where there has been perfect union and no suppuration Bloch has often found pyogenic agents.

All these facts prove that it is a great mistake to believe that a pathogenic microbe introduced into an organism causes disease and always the same disease. That such a result should follow there must be an organic consent and the clinical character will depend less on the invader than on the subject invaded.

Gangrene has the same microbic agents as suppuration, the clinical difference is due to the patient. Suppuration is therefore a morbid process which develops oftenest when the organism has no strength to resist the pyogenic agents which everywhere attack it. The causes favoring it are of two kinds, a local alteration or general modification of the organisms. It is produced in all cases by a reaction of the organism, diapedesis and karyokinesis, against certain irritating substances whether they be originally microbic or not. The causes are therefore multiple, the mechanism always the same.

But if the possibility of an aseptic suppuration has been demonstrated by numerous experiences, the result has only a theoretical interest. It explains the mechanism of suppuration, it has a primordial importance from a pathological and physiological point of view: next from a surgical stand-point it can be stated that there is no pus without microbes, but, there is no microbe of pus. Most bacteria can under certain circumstances acquire pyogenic properties.—G. H. Roger in *Revue de Chirurgie.—Annals of Surgery.*

THERAPEUTICS.

EUROPHEN IN DISEASES OF THE EYE.

My observations concerning europhen agree with those of Siebel and Eichhoff. My experience, however, is confined to the use of the remedy in cases of inflammation of the conjunctiva and cornea.

With reference to the dose employed, I would mention that for the sake of precaution, I always observe the general rule when dealing with unfamiliar remedies, of employing small quantities, and therefore applied europhen in one-half to one per cent. ointments. Hence I had never occasion to observe the

conditions of irritation which ointments of higher strength have produced upon the skin. The base of the ointment was vaseline, and patients never complained of this preparation as they do of ointments of the yellow oxide of mercury.

During the application of europhen it never happened, as in the case of iodol which I employed for the same purpose and which is of undoubted utility in the treatment of ulcerous keratitis, that I had to suspend the treatment on account of the pains experienced by the patient.

The cases in which I employed europhen may be divided into conjunctival inflammations, keratitis, and accidental traumatisms and operation wounds.

Case I.—J. U., mulatto, aged sixty-two, afflicted with subacute glaucoma and cataract, had iridectomy performed on September 12, 1891. Since the day following the operation was treated with europhen ointment 0.10:10 vaseline. The marked injection of the conjunctiva began to subside on the third day, and the wound of the cornea closed after eight days without any inflammatory reaction.

Case II.—S. P., negro, admitted to the clinic September 16, 1891. Eight days previously had got a drop of quicklime into his eye, which was followed by a burning sensation and severe pains so that he was incapacitated from work. From the day of admission europhen ointment was applied and the better to observe its effect the eye was not washed with antiseptics and no other medication was employed. The inflammatory injection of the conjunctiva was already diminished on the first day and the superficial ulcer presented a healthier appearance and is now cicatrizing.

Case III.—J. A., mulatto, aged twenty-eight, entered the clinic May 12, 1891, after having suffered for six months from trouble with both eyes. The diagnosis was kerato-conjunctivitis. Patient presented a marked scrofulous habitus. On my return from Europe, Dr. Madan told me that he had employed antiseptic washes of boracic acid and sublimate, salol ointment, and inunctions of petrolol, without obtaining any appreciable improvement, notwithstanding that these measures were combined with general treatment. Europhen ointment was then employed and considerable improvement was already manifest after fourteen days.

Case IV.—A. P., negro, aged twenty, suffering from keratitis-marginalis of the left eye. After application of europhen ointment rapid healing occurred.

Case V.—R. C., underwent an operation for an artificial pupil September 15, 1891. On the following day europhen was applied which was well borne, and the keratotomy wound healed rapidly.

Case VI.—L. M., aged forty. Partial extirpation of a tumor connected with the eyeball. Notwithstanding strict antiseptic precautions the anterior segment of the wound failed to cicatrize. Eight days after the operation we commenced the use of europhen ointment. After the first application the suppuration at the site of operation ceased, although lotions of boric acid and sublimate had been employed daily without success.

Case VII.—V. A., a native of Navarra (Spain), mechanic, had sustained a wound in the middle of the right cornea from an iron rod. The medical attendant at the factory at which he worked employed moist cataplasms with *aqua blanca* (concentrated solution of lead acetate). At the consultation the cornea showed two opaque areas, the one running in a straight line toward the periphery

and originating from a commencing hypopyon, the other in the center, of an elliptical form, measuring one-half centimetre in its greater and one-quarter centimetre in its lesser diameter. The central opaque area was due to a deposit of lead resulting from the too early use of the lead lotion. Notwithstanding the removal of the lead deposits the nocturnal pains persisted, together with the inflammatory injection of the conjunctiva, until we decided to employ europhen ointment, 0.15:10 vaseline. After the first application of this ointment these symptoms began to subside, and notwithstanding the increase of the dose to five centigrams, no after-effects were observed.

Case VIII.—Man, aged thirty, workman in a brewery, had suffered an injury of his left eye from the caustic action of ammonia, on July 25. Extensive inflammation present for five days, followed by suppuration attended with violent pains which prevented sleep and radiated toward the left side of the head and face. September 22, he presented himself for the first time at our clinic, after having been under treatment elsewhere. The conjunctiva was the seat of œdematous swelling and purulent secretion was found at the bottom of the lachrymal sac. The cornea was necrotic in its entire extent, and at its lower part the iris appeared about to prolapse. The eye was irrigated thrice daily with boric acid solution and europhen ointment was applied. Improvement at once ensued, the pains subsided, the suppuration of the cornea diminished and after the lapse of eight days the corneal surface began to present a normal appearance at its upper part.

In spite of these observations and of others to which no reference has been made because no regular account of them was kept, we are not prepared to say that these are sufficient to prove that europhen possesses greater curative virtues than other remedies employed in the treatment of diseases of the eye. Inasmuch as the eye is a very sensitive organ, we first satisfied ourselves of the innocuous character of the preparation and found that in a few serious cases in which other drugs are also servicable it has a high degree of utility.

This comprises the first part of our experiments with europhen in diseases of the eye. Later we will report concerniug its employment in severe cases, and as we have already made extensive use of europhen we will soon be in a position to institute a comparison between it, iodol, artistol and iodoform in eye practice.—By Dr. Juan Santos Fernandez: translated from *Cronica Medica-Quirurgica de la Habana*, Volume XVII, Number XXIV.

TURPENTINE IN TYPHOID FEVER.

H. C. Wood believes that when, in the convalescence of typhoid fever, the existence of local intestinal symptoms points toward slowness of healing of the ulcers, turpentine is an invaluable remedy. It is also indicated when there is marked tympanites, with dryness of the tongue, developing in the end of the second week of typhoid fever. The action of turpentine is believed to be a local one upon the ulcerated surface. The terebinthinates are slowly absorbed, and, indeed, volatilized at the temperature of the stomach and intestines, and we may readily believe, from the results of laboratory researches, that there is a special relation between the oil of turpentine and the bacillus of typhoid fever (Omelchenko). This practice has been in vogue for more than half a century, and

the author believes that it is a good one, and distinctly tends to lessen the severity of the local lesions in enteric fever. The formula recommended is oil of turpentine, 1; glycerin, 4; mucilage of acacia, 6; peppermint water to 32. The dose is one tablespoonful every four hours during the day.—*Therapeutic Gazette*, 1892, Number VI, page 366. [This sound practice, based upon intelligent empiricism of half a century ago, has recently received support from the results of laboratory experiments, and is now placed upon a scientific basis; and it is likely to outlast many of the modern methods now so much in vogue].—*American Journal of Medical Sciences.*

PATHOLOGY.

INOCULATION OF CHOLERA BACILLUS IN ANIMALS.

L. VINCENZI (*Arch. delle Scienze Med.*, Volume XXI, fasc. 3, 1892) has made experiments on animals with cultures of the comma bacillus isolated at Massowah. By injecting a minute quantity of such cultures in guinea-pigs he produced acute subcutaneous œdema followed by the characteristic phenomena of cholera intoxication and death in less than twenty-four hours. On injecting a few drops of culture into the peritoneal or pleural cavity death speedily occurred. Attempts to produce the infection by introducing the virus into the stomach failed. Vincenzi further made a series of experiments on the production of immunity, and succeeded in making pigeons and guinea-pigs insusceptible of cholera by inoculating them with cultures grown in broth and filtered by Kitasato's method. In this way immunity was very quickly conferred. The serum of animals rendered immune was found to have the power of killing the cholera bacillus, and subcutaneous injections of it instead of being followed by œdematous infiltration with scanty leucocytes caused œdematous inflamation with rapid and effective phagocytosis. Vincenzi also made guinea-pigs insusceptible of cholera by inoculating them with a few centimeters of blood drawn from a guinea-pig rendered immune in the way just described, but the immunity produced by the serum of vaccinated guinea-pigs lasts only a very short time.—*British Medical Journal.*

CHEMISTRY OF THE CHOLERA BACILLUS.

FERRAN (*Compt. Rend. de l' Acad. des Sciences*, CXV, CI) states that when the comma bacillus is cultivated in a slightly alkaline bouillon, containing lactose, paralactic acid is produced in a quantity sufficient to render the liquid distinctly acid. When this microbe is sown upon agar that is slightly alkaline, and containing lactose as well as litmus, the medium becomes red from the formation of paralactic acid. A cultivation in a slightly alkaline bouillon containing lactose presents, after being left at rest at 30° centigrade for five days, a floating mycoderm, consisting of large comma bacilli, in the interior of which may be seen one or two very small granulations analogous to spores; eventually all the protoplasm of the bacillus disappears, leaving exposed these small granulations, which are readily colored by methyl violet. The same bacillus sown in a small quantity of alkaline bouillon, contained in a capacious flask, may remain alive for more than three years, provided that the flask is closed by cotton wool,

which will allow of the renewal of the air. Under the very same conditions, and with the sole difference that the bouillon contains some lactose, the vitality of the microphyte is rapidly extinguished by reason of the acid character communicated to the medium by its own action. In ordinary culture bouillons the growth of this microbe is always rapid and luxuriant; but when the bouillon contains lactose it is disproportionately less prolific. The colonies become very numerous in consequence of the addition of that substance within a few hours; but the growth ceases completely as soon as the medium becomes acid, and before long the vitality of the microbe is destroyed. Ferran calls attention to the resemblances between the chemical function of this microbe and that of bacillus coli communis. In many particulars their pathogenic functions are also similar. Paralactic acid paralyses the chemical activity of both. The known value of that acid as a remedy for the diarrhœa caused by bacillus coli suggests the probability that its administration in cases of diarrhœa caused by the comma bacillus might be equally efficacious and beneficial. M. Ferran therefore thinks that as a remedy for cholera it would be reasonable to administer lactic acid in the form of lemonade and to assist its action by morphine, which might probably prevent the absorption of toxines and prolong the influence of the lactic acid by reducing the rapidity of its elimination.—*British Medical Journal.*

MEDICAL MELANGE.

OF SERVICE IN CONSTIPATION.—

℞	Aloin, ...	gr. 1–5.
	Extract of belladonna, . . .	gr. ⅛.
	Extract of nux vomica, . .	gr. ¼.
	Papoid, ...	gr. jss.

Misce. Fiat pil. Number 1. (Use no water to form mass). (Keep in air tight vials). Dose: one pill once or twice a day.

THE TREATMENT OF PUTRID DIARRHŒA BY MEANS OF ANTISEPTIC SOLUTIONS.—*L'Union Médicale* states that Dujardin-Beaumetz recommends the following treatment: For infectious and putrid diarrhœa, he orders that the intestine shall be flushed by means of rectal injections with antiseptic solutions of boric acid ten parts to one thousand, or a solution of naphthol in the strength of one part to one thousand, taking care that the injection is given slowly, and that the liquid penetrates as far as possible into the intestinal canal. In certain cases this treatment may be resorted to for lavage of the stomach. It is also particularly useful in cases of cancer of the rectum, especially when they are of slow progress and cachectic. The treatment should be associated with mild purgatives and vegetable diet.—*Therapeutic Gazette.*

AGES before the terms "septic" or "antiseptic" were known or used, our ancestors were practicing antisepsis with chloride of sodium, without knowing the philosophy of its action, and were nearer to nature than many scientists of our scientific era. The antiseptic property of chloride of sodium is inherent in the chlorine, sodium, like lime and mercury, having no antiseptic properties. The more readily a chloride decomposes and gives up its chlorine, the more marked are the antiseptic properties of that chloride. All the chlorides are now classified as antiseptics, while the bases of the various chlorides are usually inert,

antagonistic to antiseptic action, or so irritating to the tissues as to unfit them for use in medical or surgical practice. Following nature, custom and common sense, it has been a maxim from biblical days that "Cleanliness is next to Godliness." Water being easily impregnated with chlorine, "chlorinated water" was highly recommended for cleansing foul ulcers before anything about antiseptics was known. The cleansing property of water is well known, and an excellent antiseptic for medical and surgical practice is a carbolized-chloro-oxide of hydroxyl, known as chloro-phenique. This preparation contains all the elements that make an efficient antiseptic.

RESPONSIBILITY IN WILL-MAKING.—In concluding a paper on this subject (*Journal of the American Medical Association*), Mr. Henry A. Chaney says: We would like, then, in the first place, with respect to insane delusions, a definition of them that shall not come out at the same hole it went in at. We would like to know—and this is a bold query—whether, notwithstanding the law, spiritualism is not in fact an insane delusion; and if so, how potent it may be in the destruction of testamentary capacity. We would like to know whether dementia, short of absolute idiocy, may amount to such complete and comprehensive unsoundness of mind as conclusively to invalidate a will whatever the character of its provisions. Indeed, can a person so demented have or express any will at all; and may not the will of any person less affected be valid? We would like to know whether coma implies unsoundness of mind any more than sleep; and if not, how then can coma cut any figure in the invalidation of wills. And we would like to know whether, in spite of the classical maxim, there is any such necessary connection between a sane mind and a healthy body that any enfeebled, disordered or diseased condition of the latter—short of delirium—implies as matter or fact or law a technically "unsound" condition of the former.

A CONTRIBUTION TO THE CHLOROFORM AND ETHER QUESTION.—An investigation as to the relative danger of ether and chloroform has been conducted by a committee of the German surgical congress, and some interesting statistics were given at its recent meeting. Professor Gurlt, the chairman, states that one hundred and nine thousand two hundred and thirty narcoses have been observed, of which thirty-nine terminated fatally; of these, ninety-four thousand one hundred and twenty-three narcoses were by means of chloroform, the number of deaths being thirty-six, that is, a proportion of one to two thousand six hundred and fourteen; ether was employed in eight thousand four hundred and thirty-one cases, with one death; chloroform and ether, two thousand eight hundred and ninety-one times, with one death; ether and alcohol, one thousand three hundred and eighty times without a fatal termination; bromethyl, two thousand one hundred and seventy-nine times, also without deaths; pental, the new remedy, two hundred and nineteen times, with one death. Among the chloroform narcoses eight hundred and thirty-six were by means of Pictet's crystallized chloroform, obtained by the help of intense cold. On the motion of Bruns, the congress decided to continue the inquiry for another year. The figures already obtained agree pretty closely with those collected in this country, and abundantly sustain the position long taken by American surgeons as to the relatively greater safety of ether. They also make very incomprehensible the statements of surgeons who, like McGuire, have seen twenty-eight thousand, or like Nussbaum, ninety thousand chloroform narcoses without a death.

PHENACETINE.—Epidemics come and go under naturals laws, and when we see the end of one of them we feel sure that it will not recur for months—perhaps for years. But there seems to be one exception to this law. We call the enigmatic condition known as la grippe, an "epidemic," yet we have its precursoriæ or its sequelæ at all times, and it seems certain that it has become chronic with us and will remain. However this may be, it has its exacerbations and these are especially marked at this season. In considering the various modes of treatment as adopted by American practitioners, we note a tendency to the same general ends. The first object is to soothe pain and restlessness, and to control the febrile element, whether the latter be free or masked. For this purpose Delafield (New York county medical society) gives phenacetine in five grain doses every two hours, stating that "of all the remedies for influenza he has found nothing so reliable." Da Costa (*College and Clinical Record*, January, 1892) gives three grains of phenacetine with one of quinine every three hours. Hare (*Medical Bulletin*) has a predilection for nux vomica, giving phenacetine when fever is high. Hughes (*Journal of the American Medical Association*, February 27, 1892) writes, "the best medicines for influenza have been phenacetine, quinine, and the salicylates." Shoemaker (*Medical Bulletin*, February, 1892) says, "the aching pains yield most readily to phenacetine every two hours." Ketcham (*Medical News*, January 9, 1892)—"I have used phenacetine with sodium salicylate with the happiest results." Herman, Roche, Cooper, Walson, Curtin, Stanley, Cyrus Edson, Hamaker and many others, report to the same effect. Some practitioners give the preference to phenacetine and salophen in combination.

REVISED STATUTES RELATING TO FALSE MARKING AND INFRINGEMENT OF PATENTS.—*Section No. 4,901:* Every person who in any manner, marks upon anything made, used or sold by him for which he has not obtained a patent, the name or any imitation of the name of any person who has obtained a patent therefor without the consent of such patentee, or his assigns or legal representatives; or who, in any manner, marks upon or affixes to any such patented articles the word "patent" or "patentee" or the words "letters-patent," or any word of like import, with intent to imitate or counterfeit the mark or device of the patentee, without having the license or consent of such patentee or his assigns or legal representatives; or who, in any manner, marks upon or affixes to any unpatented article the word "patent," or any word importing that the same is patented, for the purpose of deceiving the public, shall be liable for every such offense, to a penalty of not less than one hundred dollars, with costs; one-half of said penalty to the person who shall sue for the same, and the other to the use of the United States, to be recovered by suit in any district court of the United States within whose jurisdiction such offense may have been committed. *Section No. 4,942:* Any person who shall reproduce, counterfeit, copy or imitate any recorded trade-mark, and affix the same to goods of substantially the same descriptive properties and qualities as those referred to in the registration, shall be liable to an action on the case for damages for such wrongful use of such trade-mark, at the suit of the owner thereof; and the party aggrieved shall also have his remedy according to the course of equity to enjoin the wrongful use of his trade-mark and to recover compensation therefor in any court having jurisdiction over the person guilty of such wrongful use.

COMMERCIAL MEMORANDA.

DR. ALEXANDER STRONG, of New York city, has this to say in behalf of Anderson's vaginal capsules: For the application of powdered or liquid drugs to the mouth of the womb or other parts of the genitalia they are indispensable, and from the short experience I have had with them I could not now afford to be without them. A few trials will convince the practitioner of their general utility in gynecological practice.

AT no period in the history of pepsin have so many advances been made by the chemist as at the present, and the long continued study and experimentation of experts has evolved a process by which all septic contaminations and other products of decomposition have been eliminated and the ferment produced in a soluble, non-hygroscopic, inodorous and permanent form. Add to these triumphs of pharmacy a digestive power of one to six thousand and it must be evident that the Webber Pepsin, Sharp & Dohme, is a notable advance over all other pepsins in the market.

THE Wm. S. Merrell Chemical Company, of Cincinnati, Ohio, believe that "written" labels on fluid extracts should always be looked upon with suspicion. A few houses still fill out "fractional pounds" from larger packages, but the system is being rapidly discarded for obvious reasons. To fill "orders as written" is the aim of every jobber who would secure a permanent business, and every action tending to destroy confidence is avoided. Again, why should the risk of identity and quality be assumed by the jobber when it belongs solely to the manufacturers. The Wm. S. Merrell Chemical Company, take every responsibility connected with their fluid extracts, but decline "to father" any article claiming to be "Merrell's" sent to the dispenser or consumer with a written label.

A MODERN METHOD OF MEDICATION.—Among the many methods of administering medicaments, the soluble elastic gelatin capsule is growing to be one of the most popular. There are many efficient but unpalatable medicaments which may be readily exhibited in this way, without offending the palate of the most sensitive patients, and capsules are much easier to swallow and more soluble than pills. Few physicians are aware of the many medicaments that are now administered in this way. Among these one need only mention the following to indicate the wide application of this method of giving numerous drugs: Apiol, balsam fir, balsam Peru, cascara sagrada, castor oil, castor oil and podophyllin, chaulmoogra oil, cod-liver oil, cod-liver oil and creasote, cod-liver oil and iodine, cod-liver oil and iodoform, cod-liver oil and iron, cod-liver oil and phosphorus, copaiba, copaiba and cubeb; copaiba, cubeb and buchu; copaiba, cubeb and iron; copaiba, cubeb and matico; copaiba, cubeb, matico and sandal; copaiba, cubeb and sandal; copaiba, cubeb and sarsaparilla; copaiba and iron; copaiba, cubeb and turpentine; copaiba and sandal; creasote (beechwood), one minim; eucalyptus oil; gurjun balsam; linseed oil; liquor sedans; male fern and kamala; nitroglycerin, one one-hundredth grain; oil of pennyroyal; pichi extract; salol; tar, purified; valerian oil; Warburg's tincture; wintergreen oil; wormseed oil; quinine muriate and sulphate. Of extra sized elastic-filled gelatin capsules there are castor oil, two and one-half to fifteen grammes; cod-liver oil, two and one-half to fifteen grammes; male fern and castor oil; santonin and castor oil. Messrs. Parke, Davis and Company were among the first to make this method popular, and will be pleased to afford physicians interested all desired information concerning this agreeable method of medication.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

INVOLUNTARY ASSOCIATED ACTION OF THE FINGERS AND THUMBS OF BOTH HANDS.*

By GEORGE W. STONER, M. D., Detroit, Michigan.

SURGEON UNITED STATES MARINE HOSPITAL SERVICE; PRESIDENT DETROIT MEDICAL AND LIBRARY ASSOCIATION, ETC.

AND

DAVID INGLIS, M. D., Detroit, Michigan.

PROFESSOR OF MENTAL AND NERVOUS DISEASES IN THE DETROIT COLLEGE OF MEDICINE; MEMBER AMERICAN NEUROLOGICAL ASSOCIATION, ETC.

Dr. Stoner, at the meeting of the Detroit Medical and Library Association, September 26, 1892, reported and described a very rare and interesting case as follows:

A robust man, thirty years of age, of full muscular development, including the muscles of the hands and fingers, and apparently free from disease of any kind, has a peculiar and, to me, unique affection of the flexor and adductor muscles of the thumbs and fingers, or of the nerves supplying them, which renders him unable to flex one hand without, at the same time and to a considerable extent, flexing the other hand; and this same anomalous action is shown to a less degree in extending the fingers. It is observed also that after the muscles have been called into action for several moments by efforts at grasping or holding objects of any considerable size—filling the hands—the muscles become fatigued, give up their grasp and, especially the muscles of the thumb, are thrown into a condition of flexion and tonic spasm. The case is exceedingly interesting, not only because of its rarity, but also on account of the obscurity of its primal cause. It may be due to some anomalous condition or arrangement of the nerve fibres at the point of decussation in the medulla or,

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

possibly, to an abnormal condition or pathological process in the nuclei of the spinal cord in relation with the affected muscles.

The man states that his affection is congenital but has gradually improved(?) since boyhood. He has a son three years of age who is in about the same condition, but other than this the history of the family-tree is good and has no bearing whatever on the case. Dr. A. W. Imrie, who saw the case with me, agrees in the foregoing general description and speculation. Dr. David Inglis, to whom this description of the case was referred, wrote as follows:

DEAR DOCTOR STONER: The case which you kindly submitted to me is one of unusual interest, for, as far as I can learn, no similar case is on record. In endeavoring to picture the probable seat and nature of the lesion these points occur to me:

Associated movements of the arms or hands are involuntary, and therefore usually escape our notice. I presume that the association of both arms is much more common than we realize. The most striking illustration of the fact of this association occurs in the ordinary cases of hemiplegia. Nothing is more strange, at first sight, than to see a hemiplegic patient whose voluntary control of one arm is completely lost, suddenly raise the paralyzed arm, almost as well as the sound one, when he yawns and stretches. Here is complete evidence that the movements of the two arms are coördinated in the spinal cord. There exist, clearly, connecting paths between the right and the left anterior cornua, and it is certain that an impulse coming down to the anterior cornu from the sound side of the brain and causing motion upon the corresponding side, also sets up a similar set of coördinated movements in the other side.

Now, in your patient, it is clear that a similar phenomenon occurs. Whether the motor impulse comes down from the right or left side the result is the same, a normal movement of the intended hand, but also, quite beyond the patient's volition, a movement of the opposite hand similar in kind but less in degree. Evidently every motor impulse which starts a motor discharge in one cornu also sends a similar impulse, by way of the commissural fibres, across the cord and sets up a discharge of the associated centers in the opposite cornu. The phenomenon is analogous to that of the associated reflexes and is evidently due to the same physiological arrangements in the cord. I think it is safe to say that the location of the defect, in your patient, is in the cervical cord. As to the nature of the defect the symptoms are very suggestive. In cases of writer's cramp, or other exhaustive neuroses of that type, it is a matter of common observation that the phenomena, at first unilateral, tend to become bilateral. In writer's cramp we have, further, the best illustration of spasm of the affected and associated muscles following any prolonged or severe use of the muscles innervated from the exhausted centers.

Your patient presents the analogous condition. Repeated use of the muscles, especially such use as causes distinct strain, brings out both the weakness of the innervation and the succeeding spasm. The nature of the lesion then is probably similar to that state of the ganglionic cells which exists in writer's cramp. It is noteworthy, too, that it is in similar conditions of ganglionic irritability that the phenomenon of associated reflexes occur.

One more point occurs to me. Progressive muscular atrophy very commonly begins by the wasting away of the very group of muscles involved in your patient,

notably the adductors of the thumb. Progressive muscular atrophy, too, resembles the present case in the onset in early years, persistence through life, and hereditary transmission. Again, progressive muscular atrophy depends upon trophic changes in the ganglionic cells of the anterior cornua, and that bilaterally.

In short, the present case would seem to be very closely related to progressive muscular atrophy, and it would not be at all surprising if, either in the father or little boy, atrophy should ultimately appear. I should look upon the case, then, as a hereditary defect of the gray matter of the cervical cord analogous to progressive muscular atrophy, but causing irritable weakness of the cells rather than atrophy. (Signed) Yours sincerely, DAVID INGLIS.

DEAR DOCTOR INGLIS: I am exceedingly obliged to you for your excellent report on the case of—shall I call it?—"Involuntary Associated Action of the Fingers and Thumbs of Both Hands." And now in further consideration of the same, and your reference to involuntary associated movements of the arms and hands, as especially observed in ordinary cases of hemiplegia where "the hemiplegic suddenly raises the paralyzed arm almost as well as the sound one when he yawns and stretches," and your statement that "here is complete evidence that the movements of the two arms are coördinated in the spinal cord" through connecting paths between the right and left anterior cornua, I would like to ask for my own information, whether in the solution of the problem you place muscles having to do with the movements of the arms in the same category with muscles that act in pairs, as for example those of the chest, or of the abdomen, or the eyes which, according to Broadbent or Bastian, are so frequently exempt from paralysis, or at most only slightly affected, in cases of hemiplegia for the reason, or upon the supposition, that the nerve nuclei on opposite sides of the cord are so intimately connected by commissural fibers as to be in effect a single nucleus?

Broadbent, according to Bastian, supposes that a combined nucleus of this sort will be in connection with a set of fibers from each hemisphere, and will usually be called into action by both, but it will be capable of being excited by either singly, more or less completely, according as the commissural connection between the two halves is more or less perfect. This, as will be observed, is almost precisely in accord with your own emphatic statement, that "it is certain that an impulse coming down to the anterior cornu from the sound side of the brain (*or from either side of a healthy brain*) and causing motion upon the corresponding side, also sets up a similar set of coördinated movements in the other side.

In looking over the literature of the subject, I find that cases of hemiplegia, in which a certain amount of late rigidity existed, have been recorded in which, as Bastian says, "forcible closure of the hand on the non-paralyzed side, or the movement of one or other of the fingers of this hand, leads to the production of exactly similar movements in the hand or fingers of the paralyzed side." According to the same author, "Westphal says that associated movements of this type are most prone to occur in cases of hemiplegia which date from infancy." And "Nothnagel points out that in certain cases when a hemiplegic patient, who has ceased to be completely paralyzed, extends the paralyzed fingers slowly and with effort, those of the unaffected side perform the same movement. But in the case I have recorded there is not, nor has there ever been, so far as I can learn, the slightest symptom of hemiplegia nor indeed of any

wasting or atrophy of muscles, the word *robust* applying apparently with equal force to every muscle, or group of muscles, in his body. * * * *

(Signed) Sincerely yours, GEORGE W. STONER.

DEAR DOCTOR STONER: In reply to your note it may be right to emphasize the following points: Certain spinal centers which stand in relationship to movements habitually bilateral, as, for example, those concerned in respiration, the maintenance of the posture of the trunk, etc.—these centers are in the nature of double nuclei, they are, either congenitally or by training, so linked together as to practically form a single nucleus.

Certain other centers presiding over motions in themselves unilateral but dependent upon similar motions of the other side are bilateral centers, but communicating tracts are easily opened between the two nuclei. This arrangement exists in the centers for the lower limbs, and from it results the well-known fact that young hemiplegic patients almost invariably re-acquire a fair use of the paralyzed leg. Training, in these cases, opens up commissural tracts between the opposite nuclei and ends in their becoming to a considerable extent combined into one nucleus.

The nuclei for the two arms preside over movements much more complex than those of the legs and much more closely dependent upon volitional control. It is much harder to establish communication between the two nuclei, but such communication habitually exists to some extent and can be increased, as in the case of the leg centers. Your case is of unique interest as showing the existence of such communication to a very unusual degree.

As regards the relationship of the phenomena of associated movements to hemiplegia, I should put it in this way: Hemiplegia does not cause the association, but enables us to see which movements are volitional and which ones are associated habitually. In a healthy person it is difficult, or even impossible, to say of any arm movement that it is *not* volitional, but when the will is clearly cut off by a hemiplegia the movements which occur are evidently associated. Furthermore, it is evident that associated movements are more pronounced in hemiplegics than in the healthy, owing to the loss of cerebral inhibition upon the paralyzed side: here again we see the analogy between associated movements and the deep reflexes which are exaggerated on the paralyzed side and from the same cause loss of cerebral inhibition.

I am exceedingly glad that you have reported this case, for it illustrates in a beautiful manner the relationship between the deep reflexes and associated movements, between progressive muscular atrophy and the occupation neuroses, and between hereditary weakness and acquired exhaustion.

(Signed) Yours sincerely, DAVID INGLIS.

SCARLET FEVER CONCURRENT WITH TYPHOID FEVER.*

BY W. J. BRAND, M. D., DETROIT, MICHIGAN.

THE following case forms the basis of this paper:

A. Y., forty-six years of age, suffered with what he called a sore throat, and upon examining his throat I found both tonsils enlarged and inflamed; the soft

*Read at a stated meeting of the DETROIT MEDICAL AND LIBRARY ASSOCIATION, and published exclusively in The Physician and Surgeon.

palate also sore and inflamed, extending to about midway between the teeth and the uvula. The uvula was also enlarged and inflamed, and the inflammation extended to the larynx. There were no patches or points of membranous deposit, and during the whole time none were formed. His temperature was 100° Fahrenheit, and his pulse was 96 the first day. The second day his temperature was 102°, pulse 108; the third day his temperature was 103°, pulse 116; the fourth day his temperature was 100° and pulse 86; fifth day, temperature was 99°, pulse 78; throat permitted him to eat and swallow. Examination revealed nothing but a little redness and a slight swelling of the left tonsil. I had treated this case as I should any ordinary case of tonsilitis,—with quinine, iron, and chlorate of potash as a gargle, hot fomentations and rest in bed. On the fifth day I told him I should not come to see him again unless sent for, as he would be well in a day or two, and could resume work. Most of my patients are poor, and do not wish to have a doctor call oftener than absolutely necessary, so it happens that I sometimes have to leave a case a little too soon, or before the patient is entirely well.

On the 29th I was summoned again. When I arrived I found my patient had a temperature of 102°, pulse 110, full and bounding. This was about 4 o'clock in the afternoon. He was perspiring freely; complained of headache and pain in his back; said his limbs ached, and that he had had about fourteen evacuations from the bowels that day. I asked him if he had been up and out of doors the day before, to which he replied that he had sat up and smoked his pipe, but had not been out of doors. Said he felt as well the day before as he had ever felt, and had eaten very heartily, and had had but one passage of the bowels. He said that these symptoms came on him about 1 o'clock in the morning, simultaneously with this diarrhœa. I examined him very closely, and found his temperature and pulse as above stated; no rash; no soreness of the throat; tongue moist and coated; gurgling in the right iliac region, and apparently of all the symptoms of typhoid fever. I hesitated to tell him what I suspected, but told his wife. I prescribed bismuth subnitrate, ten grains; powdered lactopeptine, ten grains; powdered opium, one grain; chalk powder, five grains. Ten such powders, one to be taken every four hours, and two tablespoonfuls of castor oil, to be taken at once. On the 30th I called again in the morning, and found his temperature 101°, pulse 102; resting fairly well, but still complaining of headache and the pain in his back. Bowels still very loose, and upon examining them I found them to be the characteristic stools of typhoid—yellowish, slimy and quite watery. I prescribed some sulpho-carbolate of zinc capsules—two grains,—twelve such, one to be taken every five hours. I also prescribed sulphate of quinine, three grains, in capsules, one to be taken every five hours, and the powders to be continued. July 1 I called in the afternoon and found him as the day before, in a profuse perspiration; temperature 104°, pulse 118; tongue dry and brownish; gurgling still in the iliac region; ochre colored stools; had had six such on this day. On July 2 I found the patient about the same as on the day previous; tongue dryer and browner in color than on the preceding day; still had diarrhœa. I discontinued the powders but continued the quinine and sulpho-carbolate zinc capsules, and ordered three drops of turpentine to be given every three hours on a small lump of sugar. I also ordered sponge baths, but they were not given very frequently, as the

patient's wife had other work to do. Wrapping in wet blankets or immersions in cold water, were entirely out of the question. The symptoms above noted continued until the 25th day of July, without much variation, when he sat up in bed. I admonished him about eating, and instructed his wife as to what she might give him, and told them I would be in again in about two or three days. He did not at any time during this attack have any eruption on his body.

I called in on the 28th, and to my surprise found him with a temperature of 105°, and pulse 130. I accused his wife of having overfed him, and not having done as ordered. She persisted that he had nothing to eat but milk and beef tea, and that while sitting up in bed on the 27th he was taken with a chill, and then began to have fever, and perspired most profusely. This she said was about 6:30 P. M. I examined his abdomen: found no tympanites and no soreness on pressure. Examined his tongue and found the tip quite red and somewhat coated. No sore throat, and no eruption. I prescribed two powders, each containing ten grains of quinine, five grains of calomel, and one-fourth grain of podophyllin, to be taken, one immediately, and the other in five hours. This was about 4:30 P. M. I called the next morning at 10 o'clock and found his temperature 103°, pulse 110; bowels had moved four times that morning. I examined his abdomen; it was rather flabby and wrinkled; there was no rash. There was no soreness of the throat, but he had considerable headache. I prescribed Fowler's solution, five minims every three hours; also elixir of lactopeptine, and simple elixir of bismuth with elixir of bromides, three ounces. A teaspoonful of this to be taken every two hours. Thinking the whole trouble had arisen from something he had eaten, I called on the 30th and found his temperature up again to 104½°, pulse 122; he had a terrible headache and was perspiring most profusely. I insisted upon some hot sponge baths. This bath was given twice this day and the medicine continued. On the 31st I called, and found him just as he was on the 30th. I ordered more hot sponge baths, and a bottle of citrate of magnesia, as his bowels had not moved either that day or the day before; and the other medicine was continued.

On August 1 I called again. Found his bowels had moved three times. Temperature 105°, pulse 132; was perspiring; tongue dry and brown; abdomen soft and no pain on pressure; passed very little urine, and that of a very high color. He called my attention to his arms, and I saw a very faint eruption coming out on them of about the size of a silver three-cent piece. There was no eruption on any other part of the body. I continued with the medicine and had sponge baths given also. I also prescribed some suppositories of quinine, twenty grains each, to be given per rectum, one every four hours. On the 2d of August I called and found his temperature 104°, pulse 122; tongue very dry and fissured. The tip of it had become a very dark red; the rash on his arm was out now very prominently, and was very red. This eruption was in blotches, and not coalescent; they were at least one inch apart, and scattered irregularly over the fore and back part of the arm. On this day there were also a few of these spots perceptible on his limbs and abdomen; also a very few on his chest. I ordered more hot baths, and gave him some tincture of capsicum and tincture of aconite, and continued the suppositories. On the 3d I found him with a temperature of 102°, pulse 116; tongue very dry, fissures very deep, and the eruption on his body and legs out more prominently. This eruption was the

same as on the arm in color and appearance. The eruption on his arms began to disappear, and instead there were little bleds filled with water. I ordered the medicine continued, with more sponge baths with alum in them. On the 4th I found his temperature 102°, pulse 112; tongue sore, and his whole body full of these water blisters, all of about the size of an American silver three-cent piece, only a little elongated; the blisters on the arm had almost all ruptured, and were drying up. Now comes the most peculiar thing of all: the rash began to appear on the face and neck. Treatment was continued. On the 5th these water blisters or blebs had appeared all over his body, and all the integument began to peel off. On this day the spots on the face and neck were very red; temperature 102°, pulse 110; treatment continued. On the 6th, temperature 101°, pulse 100; face covered with these water blisters; treatment continued. On the 7th blisters all opened on face and neck; temperature 100°, pulse 90. His whole body was desquamating. Ordered him washed with warm water and soap, and then oiled with olive oil; treatment continued, that is, the aconite and capsicum. On the 8th I found him quite well; temperature 98°, pulse 76; stopped aconite and gave him elixir of gentian, with tincture of chloride of iron; also one-half bottle of magnesia to move his bowels, as they had not moved for some days. During these several days, his diet was only milk and brandy, and water and brandy, *ad libitum*. On the 9th he was quite well and sat up in bed a little. On the 10th, 11th, and 12th, patient's condition remained about the same. On the 13th he got up; was up all day on the 14th; had good appetite and was doing well. Did not see him again until the 19th. Found his feet and legs swollen, pitting on pressure, his eyelids were puffed and his face swollen; temperature 98°, pulse 86. Prescribed infusion of digitalis, hot bath, and ordered the patient to bed. Called on the 20th and found the same condition of affairs. Temperature 98°, pulse 84. Prescribed some compound jalap powders. Examined the urine and found that it contained albumen; specific gravity 1016. Called on the 22d and found the swelling in limbs subsiding; face less puffy; temperature 98¼°, pulse 88; continued diuretics, diaphoretics and hot baths. His appetite was very good, still I kept him on light diet for one week, and continued the diaphoretics with an occasional diuretic.

In twelve days more he was well. He did the hardest kind of work in a brick yard prior to his sickness, but cannot now do anything more than ordinary work. His daughter, thirteen years of age, had typhoid fever this year, in July, but she is the only one of the family who had it. There was no scarlet fever in the neighborhood at that time, nor has there been since. The reason I think he had scarlet fever was because of the desquamation, and the parenchymatous nephritis. He was sick altogether two months and thirteen days.

THE RELATION BETWEEN CHOREA AND RHEUMATISM.*

By W. M. DONALD, M. D., Detroit, Michigan.

The protean aspects of the causation of disease is, to say the least, bewildering, if one is to take the ordinary text-book as authority. Over- or underfeeding, too much heat or too much cold, excessive humidity or dryness of the atmos-

*Read at a stated meeting of the Detroit Medical and Library Association, and published exclusively in The Physician and Surgeon.

phere, exposure to the weather or close confinement to well protected buildings, miasm—whatever that is, or the omnipresent germ—whatever that may be; each and all of these may be assigned as possible etiological factors to any number of diseases.

In certain cases, however, cause and effect stand so closely interrelated, that no room for doubt is left in the mind of even the most superficial observer. In the latter category rheumatism and chorea, standing the former for cause and the latter for effect, would undoubtedly fall; indeed the veriest tyro in medicine knows something of the intimate relations between them.

Let us review briefly the grounds for this belief. Germain Seé found, out of one hundred and nine cases of rheumatism, sixty-one followed by chorea, and out of one hundred and twenty-eight chorea patients, sixty-one, or about one-half, who suffered with rheumatic pains in the joints. J. Lewis Smith found that more than one-half of choreic patients in the bureau for the relief of out-door poor in New York city gave the history of rheumatism in themselves or parents or had unequivocal signs of heart disease. Dr. Stephen McKenzie, of England, from an analysis of seventy-two cases, found that "rheumatism had pre-existed in nearly one-half, and that there were strong grounds for believing that it had been antecedent in a very much larger proportion." Goodhart and Starr give a record of thirty fatal cases of chorea where endocarditis in the form of vegetation on the valves was present in twenty-eight, doubtful in one, and absent only once. You will pardon just one more reference to statistics. Wharton Sinkler, in "Pepper's System of Medicine," says: "Rheumatism is certainly a predisposing cause of chorea;" and goes on to show that in two hundred and eighty cases examined, about one-third gave evidences of pre-existing rheumatism or these existing endocardial murmurs. These are records, the truth of whose conditions have been substantiated by scores of other observers.

Up to this point the profession is practically a unit: so much so that on a case of chorea presenting itself to a physician the question as to the pre-existence of rheumatism should naturally arise in the mind.

A Detroit physician said to me recently that whenever he had a case of rheumatism in a child he warned the parents of the probability of chorea; and I find a similarly strong belief in the causal relation of rheumatism to chorea among a number of physicians who have a large clientele of children. Now, is it possible that there may be a relationship even more intimate than that of cause and effect? When we get beyond this point we are treading upon debatable ground, and yet occasionally a case comes up in one's practice which would suggest the possibility, at least, of a closer connection. Let me here cite two cases that have come under my observation quite recently.

Case I.—Josephine V., seamstress, aged twenty-nine, single, came to my office complaining of precordial pains and nervousness, the former partly the result of indigestion, the latter evidenced, as I at once observed, by slight twitchings of the left hand and arm, Questioning her as to the latter, she said that when she was nine years of age she was attacked in the autumn with acute articular rheumatism, affecting nearly the whole body, which persisted in spite of medicine until spring. As the warm weather approached the rheumatic affection gradually abated, but shortly after it showed signs of amelioration the muscular twitching of chorea commenced, and as one disease subsided the other developed, until

at times she was unable to sit upon a chair. During the whole summer there was almost absolute freedom from rheumatism, but the chorea remained at its worst. On the approach of the cold weather of the following winter, however, a reversal of the order of things which had existed in the spring previous took place. The chorea gradually subsiding and the rheumatic affection assuming *pari passu*, the severity which had characterized it the preceding winter. And thus it went on for seven successive years, or until the girl reached the age of sixteen, when a final summer attack of chorea drew the curtain upon a scene which had been so trying both to physician and patient. I say "drew the curtain," and yet not completely, for the spasmodic twitchings of the hand and arm, which I mentioned before, have persisted ever since, that is, for thirteen years—constituting a chronic chorea. This, of course, like other chronic attacks, may be almost quiescent when the patient is in repose but any excitement manifests it at once.

Case II.—A female, factory operative, aged seventeen, came under my care at the clinic at Saint Mary's hospital, complaining of nervousness and cardiac palpitation. Very cursory examination revealed the former to be choreic in character, and the ear over the chest demonstrated the existence of a very well defined murmur, due to mitral incompetency. Close questioning elicited the fact that about a month before this she had suffered from joint pains, not very severe, and not requiring the services of a physician. After persisting for a time they had gradually left her, and this choreic condition had developed, which, under the treatment of some irregular in medicine, was also improving when she came under my care. There still persisted, however, enough of the old pains to justify the diagnosis of rheumatism, if indeed it needed such justification with the cardiac murmur then existing. Under the salicylates both the rheumatism and chorea improved.

These are two specimen cases, more of which might be adduced. I do not think it necessary, however, inasmuch as similar cases are of frequent occurrence in the practice of every physician.

Now, from an etiological and pathological stand-point, rheumatism and chorea are plunged in obscurity. We know absolutely nothing as to the causation of one, or the morbid anatomy of the other. Every few years some new theory is developed to explain some hiatus in the previously existing theories about these two diseases, only to be found wanting when the search-light of scientific investigation is turned upon it. The lactic acid, the bácillar, the nervous, theory; that which holds to an excess of sulphur in the blood, and that which attributes the condition to imperfect tissue metamorphosis; each of these has been presented as explaining the etiology of rheumatism. With chorea, on the other hand, hyperæmia of the brain or cord, hyperplasia of the connective tissue of the latter, embolic plugs in the cerebral capillaries, a rheumatic inflammation of the connective tissue of the cerebro-spinal system, are all claimed as pathological factors in this disease.

Notwithstanding, however, that there is so much we do not know, the common valvular complications of rheumatism and the endocardial lesions found in almost all fatal cases of chorea are something proven beyond doubt by clinical and post-mortem tests. This latter fact (I mean the almost constant endocardial lesion in fatal cases of chorea) has led to the extreme view that chorea and

rheumatism were simply two phases of one and the same disease, while other observers, noting the frequency with which chorea results from other causes, as fright or nervous shock, have refused even to give rheumatism an important place as a causative agent in chorea. In this, as in all other cases, the truth lies probably in middle ground. There certainly is a close connection between the two diseases, and yet chorea is not rheumatism, nor rheumatism chorea, unless, indeed, we regard rheumatism as a neurosis, which is doubtful.

The most plausible explanation of the matter is, to my way of thinking, that of Dr. Ogle, who puts it as follows: "Recognizing the frequent existence of these fibrinous deposits or granulations on the heart's valves in chorea, I should be much inclined to look upon these post-mortem appearances rather as results of some antecedent general condition of the blood, common also to the choreic condition.

It is very freely recognized that this affection is frequently, in some way or other, connected with that condition of blood which obtains in what we call anæmia, or that existing in rheumatic constitutions. In both of these states we know that the fibrin of the blood is much in excess (as also it is in pregnancy, another condition looked upon as unfavorable to chorea); and in these states we know that the fibrin with which the blood is surely charged, is very prone to be readily precipitated, either owing to its superabundance, or from other obscure and acquired properties upon the heart's walls or valves. May not this hyperinosis be the explanation of the coincidence alluded to? namely, the occurrence of chorea in those affected with rheumatism.

I refrain from discussing the theory once so common: that chorea following rheumatism is caused by embolia swept off the cardiac valves and lodged in the cerebral capillaries, thus causing anæmia and consequent irritation of the nerve centers. It is a pretty theory, but has never been proven by post-mortem findings.

The debilitating effects of an attack of rheumatism, the debilitated condition of the average choreic, the evidence of cerebral ganglionic malnutrition found on post-mortems of those dying from chorea, make a cluster of indications pointing to a pathogenic condition of the blood as the chief factor in the causation of chorea, and suggest the hyperinosis mentioned by Dr. Ogle, and common to the rheumatic, anæmic and pregnant states as the pathogenic condition.

LECTURES.

THE TREATMENT AND MANAGEMENT OF ASTHMA.*

By THOMAS J. MAYS, M. D., Philadelphia, Pennsylvania.

PROFESSOR OF DISEASES OF THE CHEST IN THE PHILADELPHIA POLYCLINIC, AND VISITING PHYSICIAN TO THE RUSH HOSPITAL FOR CONSUMPTION OF PHILADELPHIA.

Asthma is a paroxysmal disease of the pneumogastric nerves which throws the muscular fibres of the bronchial tubes into spasmodic contraction. Its prominent symptoms are itching of the head and neck, oppression and tightness

*Delivered at the Philadelphia Polyclinic, and published exclusively in The Physician and Surgeon.

of the chest, dyspnœa, bloating of the abdomen, pain in the region of the diaphragm, cough, expectoration and fever.

Its causes are predisposing and exciting. (1) It may be inherited as asthma, and it may appear in children who come from consumptive or nervous families. It seems as if there is a predisposition necessary before the disease can develop. (2) Among the exciting causes are the inhalation of dust, powdered ipecacuanha, pollen of grasses and of roses, odors of certain animals, as cats, sheep, etc., reflex excitation coming from the nose, stomach, liver, intestines, uterus, etc. Its relation to hay fever is very close. Practically there is no difference between the two. I find that which relieves the one will also relieve the other.

Its treatment resolves itself into that (1) which aims to give immediate relief from the paroxysm, and (2) that which aims to prevent a recurrence of the paroxysm. Those remedies which relieve the paroxysm may be classified as follows: (1) Central narcotics, consisting of morphine, belladonna, stramonium, hyoscyamus, tobacco, chloroform, ether, ethyl bromide, ipecacuanha, sanguinaria, etc., and (2) the peripheral narcotics, or relaxants, consisting of nitro-glycerin, amyl nitrite, sodium nitrite, pilocarpine, etc. Now, all our more or less powerful therapeutic agents are stimulants to the general or special bodily tissues which they affect, in small doses, while in large doses they paralyze the same. All the above named agents only relieve asthma when given in large or paralyzing doses, the central narcotics exerting their influence on the central nervous system; the emetics acting on the pneumogastric filaments, while the peripheral narcotics paralyze the vaso-motor or sympathetic nerves which supply the unstriped muscular fibres of the bronchial mucous membrane and blood-vessels. While all these agents relieve asthma, and indeed in some cases are indispensable, it is quite clear that in doing so they lower or depress the functions of the parts on which they act, and that they do not therefore come up to the ideal of an asthmatic remedy. The best among them are nitro-glycerin, one or two minims of a one per cent. solution every three or four hours, by the mouth, and one-twentieth or one-tenth of a grain of morphine hypodermically once or twice a day.

What, then, is the remedy which may be given continuously for the alleviation of this disease, and without the undesirable effects of the above named classes? Which drug will relieve asthma in stimulant doses? Such a drug I believe we possess in strychnine. Of course we must bear in mind that all stimulants are only supplementary agents which maintain the functions of the body without adding any direct material support to the same, but there is also good reason for believing that they cause the tissues to appropriate a larger amount of nutritive material than they would otherwise do; and in this way our stimulant drugs become tissue builders. It has been shown that the power of strychnine in this respect is greater than that of any other stimulant. This drug has a special affinity for the nervous system, which action is especially accentuated on the pneumogastric nerves. In stimulant doses it gives a supporting influence to the respiratory movements, and unlike morphine, lobelia, belladonna or nitro-glycerin, it does not depress or narcotize the nervous system. Asthma being a spasmodic disease in what manner does strychnine bring relief? How does it act as an antispasmodic? The most probable theory of the spasmodic state is that there is at the beginning of the paroxysm a superabundant

discharge of nerve force through the pneumogastric nerves which throws the bronchial muscles into contraction. But whatever the intimate nature of this condition may be it is evidence of degradation or nerve weakness, and strychnine, by elevating the tone of these nerves, increases the controlling power of the same. A stimulant dose of strychnine will depend on the age of the patient, and the length of time during which the drug has been given, although asthmatics as a rule will bear larger doses of strychnine than most other patients. Begin as a rule with one-thirtieth of a grain subcutaneously once a day, and gradually increase to one-twentieth or to one-tenth of a grain, or more if necessary to impress the system with its full stimulant effects. Do not waste your time with small doses. To these amounts of strychnine small doses of from one four-hundredth to one six-hundredth of a grain of atropine may be added. It is best to administer these drugs in the evening because asthma is nocturnal in its attacks and your patient should be protected at night so he can sleep. Additionally to its hypodermic use this drug may be given in the following combination:

℞ Phenacetini, ... gr.lxiv.
Quininæ sulph., ... gr.xxxii.
Ammonii murias, ... ʒiss.
Pulveris capsici, ... gr.iv.
Strychninæ sulph., ... gr.1½.

Misce. Fiat. capsulas number thirty-two. Signa:—One capsule four times a day,

or in the following:

℞ Strychninæ sulph., ... gr.1½.
Syrupi acidi hydriodici,
Syrupi hypophosph. . . . . āā flʒij.

Misce. Signa:—One teaspoonful four times daily.

In fact light cases of asthma require no hypodermic injection and do well enough when the above named preparations are given. In severe cases it is of course advisable to add morphine or nitro-glycerin to the strychnine and atrophine treatment, especially at the beginning. This treatment will break up the paroxysms, but even after they are broken many old asthmatics still remain in the most abject misery. They may be compelled to sit up day and night panting for breath, and still labor under the impression that they are suffering from asthma. This is a mistake: it is not asthma, but the natural state of exhaustion which follows asthma. The respiratory movements as well as the whole nervous system are almost completely paralyzed. It is the disorder and chaos following the flood. The dyspnœa is not paroxysmal as before, but is felt now on the slightest exertion. This stage of the disease is most important from a therapeutic stand-point. Nitro-glycerin, lobelia, and other narcotics are of no use. Rest is most essential now. They must do absolutely nothing. Lie down if they can, or sit still if they must. They should even be fed. I have known patients who were breathing comfortably bring on a most severe exhaustion-dyspnœa by merely undertaking to write a letter. During the rest treatment, give food of the most nourishing character, such as freshly expressed beef-juice, a cupful a day, beef-powder, beef, mutton, milk, oysters, clams, etc. In this stage

strychnine is also of the greatest value. Massaging is also to be used in desperate cases. Electricity is also of great service. So are rarefied air and calisthenic exercises obtained in the pneumatic cabinet treatment. To procure sleep at night morphine may be added to the hypodermic injections of strychnine.

Success in treating asthma depends as much on the proper management of the individual as it does on the administration of drugs in the proper doses and at the proper time. Principles can only be carried out by paying attention to details, hence each patient must be under the complete control of his physician in regard to his food, medicines, exercise, and everything else. This pertains particularly to old asthmatics who are constant sufferers. If the instruction which is given this evening is closely followed there are very few cases which will not yield to it; and as an illustration of what may be done in desperate cases I will conclude by relating the condensed histories of the two following examples, the second of which is still under occasional observation:

Case I.—A., aged forty-six years, a sufferer from asthma for thirty-five years—the attacks becoming more frequent and severe during the last three years. For four weeks before coming under observation he had been unable to lie down on account of his disease. The injection of strychnine, one twenty-fifth of a grain, and morphine, one fifteenth of a grain, gave him almost immediate temporary relief. The morphine was discontinued after the second day, and one minim of a one per cent. solution of nitro-glycerin every four hours was substituted. The strychnine was gradually increased, and the nitro-glycerin omitted in the course of a week. Additionally he was kept quiet, received nourishing food, and strychnine by the mouth. In three days he was able to lie down, and in ten days more the asthma ceased.

Case II.—B., aged fifty years, an asthmatic for twenty-five years—daily attacks for one year, during which time he had been unable to lie down day or night. Came under observation six weeks ago, and received almost the same treatment as the previous case. The relief was prompt after each injection, but this had to be continued nightly for five weeks to keep the stubborn disease in abeyance. In two weeks he was able to lie down and is now practically well.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

ANNUAL MEETING, OCTOBER 2, 1892.

THE PRESIDENT, GEORGE W. STONER, M. D., IN THE CHAIR.

SECRETARY'S ANNUAL REPORT.

MR. PRESIDENT AND GENTLEMEN: From the stand-point of your secretary the Detroit Medical and Library Association has concluded a most successful year. The attendance has been good, the papers plentiful, discussions spirited and instructive, pathological specimens numerous and varied, especially the varied forms of the greatly beset organ, the ovary. We have had little and big, black and white, smooth and wrinkled, cystic and non-cystic, innocent and dangerous,

and various other forms of ovaries. In fact when all others failed the ovaries never gave out, and I, as secretary, would thank the many and celebrated ovariotomists of this society for having, upon several occasions, helped me out of a good many deep holes.

Our papers and discussions have not been all by home talent. We have drawn for our supply from east, west, north, and south. DR. F. E. WAXHAM, of Chicago; DR. JAMES PRICE, of Philadelphia; DR. JOHN L. BRAY, of Chatham; DR. E. P. CHRISTIAN, of Wyandotte; DR. JAMES M. MARTIN and DR. J. A. WESSINGER, of Ann Arbor, together with DR. G. V. VOORHEES, of Coldwater, Michigan, are some of the names which have at intervals appeared upon the announcement cards of the association during the past year. Of these, as well as of our own active members' work for this year, we are justly proud. We have not only been cosmopolitan in regard to the source from which our entertainments have been drawn, but our papers and discussions have ranged over a wide field, embracing surgery, medicine, gynecology, obstetrics, pediatrics, dietetics, embryology, ophthalmology, bacteriology, otology, electro-therapeutics, neurology, etc.

We have had forty regular meetings of the association during the year with an average attendance of thirty-two, which might, by a little more diligence upon the part of the next secretary in getting up more interesting papers, etc., be increased considerably. Our largest attendance was eighty, our smallest, fourteen.

The forty meetings were provided for in each case either by a paper or general discussion. The papers read were as follows: (1) "Chronic Nervous Dyspepsia," DR. B. P. BRODIE; (2) "Identity of Diphtheria and Membranous Croup," DR. W. L. WILSON; (3) "Bacteriology in Medicine," DR. HENRY J. HARTZ; (4) "Dietetics," DR. HENRY F. LYSTER; (5) "Electrical Therapeutics," DR. J. FLINTERMANN; (6) "Intubation," DR. J. P. O'DWYER; (7) "Malaria," DR. JOHN L. BRAY; (8) "The Treatment of Scarlet Fever," DR. CARL BONNING; (9) "Cataract," DR. EUGENE SMITH; (10) "Hæmoptysis," DR. GEO. DUFFIELD; (11) "Retention of the Dead Ovaries in Utero," DR. HELEN F. WARINER; (12) "Intubation," DR. F. E. WAXHAM; (13) "Some Psychical Phases of Hypnotism," DR. W. R. CHITTICK; (14) "Albuminuria in Life Insurance Examinations," DR. S. G. MINER; (15) "Purulent Ophthalmia," DR. DON. M. CAMPBELL; (16) "Varicocele," DR. T. A. MCGRAW; (17) "Is the Cure of Disease by Electrolytic Action well Founded or Not," DR. D. S. CAMPBELL; (18) "A Short Paper on Extra-Uterine Pregnancy," DR. A. BENNETT; (19) "Trachoma," DR. R. W. GILLMAN; (20) "A Short Paper on Influenza: Its Different Kinds and Best Treatment," DR. J. B. NEWMAN; (21) "Albuminuria in Pregnancy," DR. F. B. TIBBALLS; (22) "Stammering," DR. ALONZO BRYAN; (23) "Acetate of Lead in Hæmorrhage," DR. J. NEWELL; (24) "Interesting Translations," DR. J. V. BECELAERE; (25) "A Line of Action in Puerperal Convulsions," DR. DELOS PARKER; (26) "Three Surgeons," DR. G. V. VOORHEES; (27) "Intra-Uterine Amputation," DR. J. A. WESSINGER; (28) "A Foreign Body in the Ear," DR. WILLIAM LOCKHART; (29) "Scarlet Fever Concurrent with Typhoid Fever," DR. W. J. BRAND.

Four papers which had been promised are held over for future reading.

GENERAL DISCUSSIONS.—(1) "Treatment of Tuberculosis;" (2) "Are American Women Degenerating;" (3) "Pathological Evening;" (4) "Cholera;" (5) "Ethics of the American Medical Association."

There were in addition to these papers and general discussions, one hundred and five pathological specimens exhibited, forty-one cases reported, nine patients brought before the society, and two instruments shown.

The advisory council has had considerable work to do, but they have not done it, and I might say here that this committee is altogether too large and it is an impossibility to get it together. It has had one meeting during the year. A committee of three would be plenty large enough and would do the work well.

The following elections have taken place during the year: Active members, nineteen; corresponding, two; honorary, two. There are now awaiting for the action of the council: Corresponding members, three; active members, six. Making in all thirty-two additional new members.

The cold hand of death has been laid twice upon our members, removing two of the best known physicians of this city, namely, DR. C. B. GILBERT and DR. CHAS. J. LUNDY. One member has been expelled from the society, and one application refused admission. There are now one hundred and sixty-five active members.

All of which is respectfully submitted.

DON. M. CAMPBELL, M. D., Secretary.

STATED MEETING, OCTOBER 10, 1892.

THE PRESIDENT, FREDERICK W. MANN, M. D., IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. J. J. MULHERON presented a uterus. Epithelioma was diagnosed several months ago when the ulcerations of the cervix were cauterized with chloride of zinc. I saw the patient frequently thereafter and treated her with mild non-irritating applications. The cervix has been curretted twice, but in spite of this treatment there were signs of the encroachment of the disease on the vaginal and uterine walls. With the assistance of DRS. STONER, WRIGHT, and WAMSLEY, I performed vaginal hysterectomy. During the operation I was compelled to use several strong whip-cord guys in order to pull the uterus well down. The hæmorrhage was very profuse and many clamps were used to control it. The vagina was packed with iodoform gauze and the patient is doing well.

DR. H. O. WALKER: This specimen is a large osteo-sarcoma and was removed from a boy fourteen years old, presenting the following history: Four or five months ago he received a blow on the thigh which produced a large swelling. It was looked upon at first as being inflammatory but not subsiding under treatment the attending physician brought him to me for consultation. I diagnosed osteo-sarcoma and advised immediate amputation at the hip-joint. This I did by Wyeth's bloodless method. The boy has had no untoward symptoms, scarcely any rise of temperature, and not a drop of pus. I present herewith the pathological specimen, a photograph of the leg before amputation, another photograph of the stump, and one of the tumor on section.

DR. FLINTERMANN: I once saw a case similar to this during my student days which made a recovery.

DR. BECELAERE: Does the prognosis vary relative to the position at which the amputation is made, that is, in the continuity of the bone or at the hip-joint.

DR. H. O. WALKER: It does. The majority of surgeons believe that the best results are obtained by removing the whole of the bone affected.

DISCUSSION OF PAPERS.

DR. WILLIAM M. DONALD read a paper entitled "The Relation of Chorea to Rheumatism." (See page 535).

DR. J. FLINTERMANN: This is a very interesting and important subject. Authorities have always claimed that there is a relationship existing between chorea and rheumatism, but no one has been able to explain the exact nature either of rheumatism or chorea. In chorea there must be a certain center influenced in order to produce the symptoms, but we also know that these symptoms may affect either the upper or lower extremity or the facial muscles. We further know that the affection is confined to one side and it is hard to explain these variations upon the rheumatic theory, that is to say, it is difficult to see why the rheumatic poison circulating in the blood should affect one set of cells at one time and another set of cells at another time, but these cells may be differently affected by different kinds of poison circulating in the blood. The one-sided chorea might easily be explained upon the embolic theory. The disease is found mostly in young people because in them the nervous system is in an undeveloped state, a slight cause producing the result. While we must admit that many cases of chorea are preceded by rheumatism, still there are many more cases of the latter which are not followed by chorea. We further see many cases of chorea following diseases which are distinctly not rheumatic in their nature, such as torticolis or arthritis following scarlet fever. In the case which DR. DONALD reports of the lady suffering for many years I would not look upon her case as one of chorea but rather one of hysteria. Chorea may have many causes. The cases vary as to the locality of the choreic manifestations, therefore the central irritation must vary as to its locality. When paralysis of sensation occurs the sensory centers must be involved. Many cases of chorea come from fright and they certainly are not of rheumatic origin. After the presence of heart murmurs in choreic patients we know that these patients are almost always extremely anæmic. May not many of these murmurs be due rather to the anæmia than to any valvular lesion? How is it that chorea attacks the female much more frequently than the male? Surely if rheumatism were the cause one sex would be equally affected with the other. To my mind, therefore, it is doubtful if rheumatism is the sole cause of chorea.

DR. DAVID INGLIS: In discussing the paper of DR. DONALD we need to clear the ground of certain matters which frequently lead to confusion. First, chorea is not a disease but a group of symptoms. It happens that several groups of symptoms which all present the common characteristic of coördination of intentional movements, but which in other respects differ widely, are commonly given the title of chorea. There is an essential difference between habit chorea and rheumatic chorea. So, too, we can clearly separate hereditary chorea. Again, there are choreas of a hysterical type.

The chorea of commonest occurrence, and that in which the relationship with rheumatism has been long recognized, is of acute onset, is essentially self-limited, is rarely fatal, and to the motor incoördination are usually added evidences of impaired action of the higher cerebral centers, in the shape of general motor weakness, intellectual defect more or less profound, and emotional instability. It is clearly wrong to claim to explain cases showing such widespread yet transitory nervous defect by the pathological lesions observed in entirely different forms. Similarly we cannot accept the pathological lesions found in the chorea, so-called, of the lower animals, as explanations of the chorea which we discuss to-night. There is reason to believe that the choreas of the quadrupeds are more truly allied to spinal ataxia than to rheumatic chorea. In short, it is not to be believed that the occurrence of such gross lesions as dilatation of the central spinal canal, softening of distinct areas of the cord, or patches of sclerosis, are types of the pathological processes which occur in rheumatic chorea. It is not reasonable to believe that a series of symptoms which experience shows to be almost always transitory and of comparatively short duration, is the result of lesions so destructive and permanent.

The chorea of pregnancy, while of much greater fatality, and showing a much greater intensity of symptoms than the common cases of rheumatic chorea, still resembles it in the acuteness of onset, the simultaneous onset of symptoms of mental and emotional and general motor weakness. It is fair to judge, then, that the post-mortem appearances in the somewhat frequent fatal cases of chorea of pregnancy, and the rare cases of fatal rheumatic chorea, afford a picture of the pathologieal processes which is reliable. If so, it seems evident that the process is one of widespread hyperæmia which passes, according to the severity and continuance of the condition, into serous infiltration, minute hemorrhages, venous thrombosis, diffuse softening of the nervous substance adjoining the blood-vessels involved.

The whole process involves a more or less complete impairment of the nutrition of the nervous elements which shows itself functionally as *irritable weakness* in the motor, the sensory, and the mental processes.

The relation of chorea to rhematism involves, then, the method by which such a hyperæmia is induced. Before considering this, however, it ought to be stated that these post-mortem appearances characterize the gravest types of chorea, and we should bear in mind that it is entirely possible, indeed, altogether probable, that the rheumatic poison may affect the nutrition of the nervous cells *directly* without causing any hyperæmia at all, a state of things which probably exists in by far the larger number of cases of chorea.

Returning, then, to the gross pathological changes, Are we to accept Kirke's theory? Kirke, and after him Hughings Jackson, believed that a rheumatic endocarditis caused fibrinous exudate upon the valves of the heart, that small particles were dislodged and plugging the arterioles in the spinal and cerebral centers caused foci of inflammation and softening. To accept this seems to me impossible for several reasons. First, it compels us to assume that fibrinous exudates are in the habit of becoming, so to speak, pulverized. The area of nervous matter implicated in the diseased process in chorea is so large that we would need to imagine, not an occasional, but a multitude of such emboli. The onset of the whole group of symptoms is often simultaneous so that we would

need to imagine, not the detachment of successive emboli, but a shower of them. There is no demonstration that fibrinous exudates do so break up, but all our experience is that the tendency is rather to aggregation and hardening. If Kirke's theory were true we should expect chorea as a concomitant of every case of aortic aneurism, for the fibrinous material ready to be pulverized would be great. The embolic theory is further disproved by the post-mortems upon cases of chorea of rheumatic association in which no lesion of the endocardium existed. Clearly rheumatic chorea is not always caused by fibrinous emboli—some other cause there must be.

A poison circulating in the blood and reaching every arteriole undoubtedly exists in rheumatism. This poison, we know, sets up rapid hyperæmias in the joints or serous cavities. It causes serous infiltration. It causes capillary hæmorrhages as shown in the frequent epistaxis of rheumatism. It is capable of setting up these conditions of the blood-vessels elsewhere, and it seems reasonable to believe that it is the cause which sets up these conditions in the nervous centers; in short, instead of saying that rheumatism is a cause of chorea, I believe we should say that the same thing causes either rheumatism or chorea or both. Upon this point Dickinson says: "We see in chorea a widely distributed hyperæmia of the nervous centers, not due to any mechanical mischance, but produced mainly by causes of two kinds, one a morbid, probably a humoral, influence which may affect the nervous centers as it affects other organs and tissues, the other irritation in some mode, usually mental, but sometimes what is called reflex."

It may be objected that inasmuch as the joint symptoms in rheumatism often go as rapidly as they came, leaving hardly a trace behind, we should expect the chorea to do likewise. This does not follow; for the reason that such highly organized elements as those of the nervous structures do not as readily recover their nutritive activity as those of a lower grade. All forms of nervous disease bear witness to the fact that nerve cells whose nutrition has been in any way impaired only recover slowly. Hence, even a quick and transient change of nutritive activity brought about by the rheumatic poison might, and probably does, leave the cells unable to resume their normal function for a long time. The hyperæmia, the serous infiltration may pass off in a few days, the nervous protoplasm takes weeks to recover.

Herein, I take it, lies the explanation of the occurrence of chorea from fright or long continued reflex irritation. An intense mental emotion need not cause either hyperæmia or anæmia; it need not derange the circulation at all, and yet can conceivably cause such a complete exhaustion of the nerve cell that it takes a long period to recover its power of nourishing itself normally. The same is true of reflex irritants.

We are prone to attribute too much to states of the circulation. The blood-vessels may bring to the active cells of any organ perfectly normal blood in perfectly normal amounts, but the individual activity of the cell after all dictates whether the blood shall be used or not. "You can take a horse to water, but you cannot make him drink." You can vary the blood supply, but you cannot make the cell drink. So, after the transient hyperæmia of the rheumatic poison, or after the cell is exhausted either by a sudden great disturbance, such as a fright, or after a constant small disturbance, such as a

reflex irritant, we must wait until the nerve cells slowly regain themselves.

I have spoken of the hyperæmia of the rheumatic poison. It would seem that in many cases the rheumatic poison exerts its influence upon the protoplasm of the cells directly without any hyperæmia at all. This is probably what occurs in those cases of recurring chorea in which, after the first time, no signs of rheumatic affection elsewhere can be found. Upon cells once injured by the rheumatic poison it seems to need the action of only minute quantities of the rheumatic poison to reproduce the old defect.

If these views of the relation of chorea and rheumatism be correct; if the same poison circulating in the blood, acting either directly upon the protoplasm of the nervous cells or indirectly by causing a hyperæmia of the cerebral and spinal blood-vessels, cause chorea, and acting throughout the body cause rheumatism, we should keep two things in mind:

First, that the chorea continuing after the rheumatic symptoms have ceased does not call for a continuance of the anti-rheumatic remedies, but rather for such measures as will tend to restore the nutrition of the nerve cells.

Second, that a person who has once had chorea of rheumatic origin should keep up such regulation of diet, clothing, habits of life, and atmospheric conditions, as will best prevent the slightest rheumatic poisoning. This should be done for two or three years, even though no rheumatic symptoms appear. Our commercial relations with our patients compel us to cease our supervision of them as soon as the acute disorder is over. Were we to stand to them in the more philosophical position of permanent medical police we could regulate matters so that recurring attacks of chorea would largely cease.

DR. EMERSON: That there is a significant relation between the two diseases is apparent, and that they frequently alternate is everybody's experience, but to positively assert that they stand in relation of cause and effect is difficult. I call to mind a case of chorea occuring in a child before the age of puberty. Three times she recovered, and three times relapsed, until finally after the third relapse she developed a high fever, followed in a few days by an acute articular rheumatism and endocarditis, which left a permanent mitral murmur. This case suggests, but does not prove, the connection. Arsenic is good in chorea, but of no value in rheumatism. The salicylates are good in rheumatism, but of no value in chorea. Chorea has a distinct tendency to disappear of its own accord.

DR. J. B. NEWMAN: I could never see that the two diseases were related. In rheumatism we have lactic acid as a permanent lesion. In chorea a nervous element is the permanent lesion. Rheumatism affects the negroes, chorea almost never. Chorea affects intelligent, nervous people, and is a central nervous lesion affecting the brain rather than the cord, as is shown by the suspension of the disease during sleep. In rheumatism we have a urine of high specific gravity. I would say, therefore, that the diseases are distinct.

DR. C. W. HITCHCOCK: Some statistics show that rheumatism stands in the relation of the cause of chorea; other statistics show that it does not. Weir Mitchel's statistics show that the rheumatism is a predisposing cause of chorea only in as much as it lowers the general vitality. Recent statistics show that there is a correspondence between the existence of chorea and storm centers, showing that there is something in the weather which affects similarly both diseases. The existence of storm centers affects rheumatism and chorea much more than ordinary diseases.

DR. DONALD: There is a close connection between the two diseases. If it be not atmospheric it must be from some poison in the blood. The hyperinosis being the indication of that poison, the exact nature of which is undetermined.

PREVAILING DISEASES AND REPORT OF CASES.

DR. GEORGE W. STONER: A man was sent to the Marine hospital on account of a foot which had been crushed and amputated. His bladder was found to be full, the catheter was passed and the urine removed, but when we came to withdraw the catheter only half of it came away. By persistent manipulations half of what remained was removed. It was found impossible to reach or remove the remaining portion. It was determined to leave it until the man recovered from his injuries and then perform lithotomy if necessary. Much to my joy, however, after twelve hours the man passed the remaining piece of catheter per urethram.

DR. F. W. ROBBINS reports a case of strangulated hernia in a child. Hernias in children are not unusual, especially the congenital variety, but strangulated acquired hernia are rare, and for this reason my notes on this case may be of interest. F. C., aged eleven months. Several times during the summer I had prescribed for the child on account of diarrhœa, but had not seen him for some time, when on the evening of September 3, 1892, his mother brought him to my office. There was present a lump in left inguinal region noticed for the first time the previous evening by his mother, at which time he had a movement of the bowels. There had been no vomiting or severe pain, although the child was quite restless. There was no impulse on coughing or crying, nor could the testis be discovered hidden behind the tumor, which had a slight sense of fluctuation. These symptoms hardly produced the symptomatic picture of strangulated hernia. Under chloroform taxis produced no effect on the tumor, and as this was a very busy morning and the case not urgent, I ordered poultices to be applied until afternoon when, as there had been no change in the condition, I carefully cut down upon the tumor, where I found a knuckle of intestine over half an inch long, highly congested, in a sac filled with serous fluid. Upon nicking the constricting band at the internal ring the gut was easily replaced, the sac cut off and deep and superficial stitches inserted. The patient is well, with the exception of a congenital phimosis which I shall attend to in a few days. Possibly the result is much better than it would have been had we waited for more serious symptoms. In such cases it is not wise to delay, but when gentle taxis under chloroform does not avail, have recourse to the knife. Dr. Sherrill kindly assisted me in the operation.

DON M. CAMPBELL, Secretary.

EDITORIAL ARTICLES.

SYMPHYSIOTOMY.

ANTISEPTIC methods have lessened the mortality of the various Cæsarean operations to such a degree as to make them no longer the most dreaded alternatives to which the parturient woman can submit. Nevertheless, it is felt that any expedient for rendering these formidable operations less frequent cannot but

be a boon to suffering humanity. The mortality of Cæsarean operations is still sufficiently high to make them an ulterior choice when other effective or practical methods of dealing with pelvic deformities present themselves.

During the last six years the operation of symphysiotomy, or should we say pubiotomy, has been slowly growing in favor. The operation which consists in severing the ligamentous union at the symphysis pubis is an old one and was first suggested by Pineau in 1598. It is, therefore, three hundred years old. During these three centuries which have elapsed since its inception eighty-five operations have been made with a mortality of thirty-three per cent. From January, 1886, to the present date, that is to say during the era of antiseptic surgery, there have been fifty-two recorded cases of this operation, with only a single death, and this death apparently due to avoidable septic infection. That the operation has grown in favor is shown in the fact that twenty-one operations have been made this year in Italy, France, and Germany. Two operations have been made in America, the first case being that of Dr. Charles Jewett, of Brooklyn, recorded in the November number of the *Brooklyn Medical Journal.*

The usual method of performing the operation consists in first severing the attachments of the recti muscles to a sufficient extent to admit the introduction of the finger below the symphysis. A blunt-pointed bistoury is then introduced along the finger and the ligaments cut upward and outward. The insertion of a probe secures protection to the urethra, by allowing it to be pushed slightly to one side. The spreading of the pelvic bones is usually immediate, and permits the speedy extrusion of the presenting head. The symphysis unites after the operation without complication.

The operation is doubtless destined to become a recognized surgical proceeding. That it will in some measure replace the barbarious practice of craniotomy is to be ardently hoped, and the fact that so distinguished a champion of Cæsarean operations as Leopold has recently advocated its employment, speaks well for its use in cases which would otherwise be relieved by more strenuous measures.

HOMŒOPATHY IN THE STATE UNIVERSITY.

THE homœopathic department of the state university has been recently occupying public attention, and the numerous rumors in circulation regarding its status and prospects have given rise to several interviews in the daily press. There is good reason for believing that whatever may have been the nature of the newly-projected scheme, it has by this time succumbed to arrest of development. No proposal, contemplating a new professor of anatomy, or a division of the practical chairs of the regular faculty with members of the homœopathic faculty, has been submitted to the board of regents. Several of the board have, however, been individually approached, and some have even acquiesced in the wisdom of an arrangement which would curtail the present expense of maintaining two schools. The proposed arrangement whereby most of the chairs of the regular department were to be split in twain and divided with the homœopathic faculty, did not, however, seem to meet with much approval at the recent meeting of the homœopathic faculty. This, however, might be due to the absence of its chief promotor from their counsels. The regular faculty have not committed

themselves, further, it is said, than to place on file the communication suggesting these changes, and the profession of the state can doubtless rely upon their wisdom to avoid effecting any undignified compromise with the votaries of sectarian medicine.

EDITORIAL BREVITIES.

THE PAN-AMERICAN MEDICAL CONGRESS.

THE preliminary announcement of the Pan-American medical congress has been issued. It is a handsomely printed document, and indicates an amount of industry on the organizing officers which is very creditable. The expenses of organization are very high and have to be met out of registration fees. It is therefore important that those who intend to join the congress should send their fees as soon as possible to the treasurer, Dr. A. M. Owen, Evansville, Indiana.

MR. TAIT AS AN AGITATOR.

MR. LAWSON TAIT is occupying a very discreditable position on the vivisection question. He is fraternizing with bigoted theologians, whose insults to the profession to which Mr. Tait belongs are unpardonable. At a recent meeting of the antivivisection society Mr. Tait was introduced as "the hero of the meeting," "*the Athanasius contra mundum.*" Mr. Tait can do the damnation act as well as anyone since the days of Athanasius, but he is hardly qualified to "offer to the British public an apology on behalf of his profession." It is superfluous for Mr. Tait to apologize for the achievements of Lauder Brunton, Hughlings Jackson, and Victor Horsley. Their work will answer for itself when much that Mr. Tait has done will have been forgotten.

HYPOCRITICAL ANTIVIVISECTIONISTS.

OF apt illustrations of the hypocrisy which so frequently prevails among antivivisectionists, Mr. Victor Horsley gave two striking specimens in his address before the church congress at Folkestone. One affected the reputation of Mr. Lawson Tait, who was announced to speak in the interests of antivivisectionists, but who permitted a resolution endorsing vivisection to pass through the British medical association without protest. The other concerned the Duke of Newcastle, a vice-president of an antivivisection society. The duke's brother was bitten by a dog, and the duke desiring to know if it had rabies took the dog, after killing it, to Professor Horsley. He was informed that inoculation experiments alone could determine the question of rabies. To these experiments the distinguished antivivisectionist assented, and frequent enquiries were made on behalf of the duke to ascertain the result. Probably the sentimentalism of most antivivisectionists would not survive the bite of a rabid dog.

PETTENKOFER AND THE CHOLERA VIBRIO.

PROFESSOR VON PETTENKOFER does not believe the comma bacillus to be the sole cause of cholera. The constant occurrence of the microbe in the excreta of cholera patients indicates that it holds some etiological relation; but it is open to doubt whether it be alone the cause of disease. To test the point the Professor made some personal experiments. Several of his pupils offered themselves for

the purpose, but he thought that he himself, seventy-four years old, glycosuric and toothless, was the best subject to run the risk of experiment. Two hours after a meal when, according to Voit, there could not be more than one hundred cubic centimetres of gastric juice, with three per cent. of hydrochloric acid, in his stomach, he swallowed a cubic centimetre of fresh culture of the comma bacillus, after first neutralizing whatever acid there might be in the stomach by taking a gram of sodium bicarbonate. The only result that followed this experiment, was a more or less severe attack of colic and a slight diarrhœa. Thus Pettenkofer concludes that the comma bacillus during its sojourn in the intestine does not produce the specific poison causing Asiatic cholera.

MEDICAL NEWS.

SIXTY THOUSAND school children die in France annually.

THE physicians of London average one to each one thousand persons.

DR. FRANK H. FARNUM has been appointed one of the county physicians for Wayne county.

A NEW medical monthly, printed in the Spanish language, has been launched in New York city.

DR. J. E. CLARK, of Detroit, has been appointed surgeon-general of the Michigan state troops.

DR. GEORGE ROSS, a well-known member of the Canadian medical profession, died in Montreal November 8.

DARTMOUTH medical college graduated a class of twenty-eight at its annual commencement, November 22.

THE *Chicago Clinical Review* is a new monthly edited by Drs. George H. Cleveland and Albert I. Bouffleur.

QUARANTINE in New York still continues, and will last until no more cases of the disease occur in European ports.

MEDICAL CONSUL.—Dr. J. C. Smodbery, editor of the *Pacific Medical Journal*, has been appointed consul at Bagdad.

THE EFFECT OF EDUCATION ON MARRIAGE.—It is stated that forty-five per cent. of Vassar graduates are married.

DECREASE OF INSANITY.—The census for 1890 shows a lower ratio of insanity to the population than did the census of 1880.

A MONUMENT erected to the memory of Dr. Marmonier, reviver of the transfusion of blood, was recently unveiled at Domène.

LOCAL ANÆSTHETICS.—Muriate of trapa-cocaine or tropsin, and eugenol-acetamide are the names of two new local anæsthetics.

THE largest private medical library in this country is said to be that of Dr. N. Senn. It contains about twenty thousand volumes.

THE moon being an absolutely sterile planet, is considered to be a favorable place for the performance of major surgical operations, where asepsis is required.

THE Alabama state medical examining board rejects forty-one and sixteen one-hundredths per cent. of candidates who apply for a license.

ELECTRIC DEATH SENTENCE.—A Brooklyn boy sixteen years old has been sentenced to death in the electric chair for the murder of an infant.

DR. GEORGE CHAFFEE, of Brooklyn, was re-elected president of the New York state association of railway surgeons at its recent meeting held in New York city.

FROM February 8, 1888, to June 30, 1892, one thousand one hundred and forty-nine persons applied for treatment at the Pasteur institute in Rio de Janeiro, Brazil.

WOODEN SPATULAS.—A tongue-spatula made of wood, cheap, and answering the purposes of a single examination, is being manufactured in the interest of cleanliness.

M. PASTEUR will be seventy years of age on December 27. The society of the physical and chemical sciences at Copenhagen will present him with a medal on that occasion.

MASSACHUSETTS has a record as a sterile state. One-fifth of the married women are childless. In Suffolk county the proportion is nearly one-fourth. So says the last census.

JOHN STRAHAN, Belfast, Ireland, has received the Warren triennial prize of five hundred dollars awarded by the Massachusetts general hospital. "Rickets" was the subject of the thesis.

BLACK DEATH.—An epidemic of black death has followed the footsteps of cholera in Turkestan. In Askabad the disease killed one thousand three hundred and three persons in six days.

DOCTOR OF MEDICAL SCIENCES is a new medical degree proposed for establishment in France by the French Minister of Public Instruction. This title will be superior to the ordinary M. D.

THE Atlanta society of medicine has appointed a committee to draft and submit a bill to the general assembly of Georgia providing for the establishment of a board of examiners in that state.

AUDIBLE NERVE CURRENTS.—Dr. Wedensky, of Saint Petersburg, at the recent physiological congress held in Liège, contributed a series of telephonic demonstrations of the currents of action in nerves.

ROOSEVELT HOSPITAL, of New York city, has received three hundred and fifty thousand dollars from Mrs. Abram A. Anderson for the founding of a medical pavilion in memory of her father and mother.

THE state asylum for insane criminals at Auburn, New York, has been abandoned on account of insufficient capacity, and the inmates transferred to the new asylum at Mattewan, near Fishkill-on-the-Hudson.

LONDON has a unique and novel institution known and designated as a "home for the dying," founded by a Scotch lady. It was established to fill a long-felt want, and has been patronized so freely that an enlargement is necessary.

IMPROVISED CATHETERS.—Dr. Hingston, in his address at Nottingham, said: "Wherever there is a woman there is a hairpin." A writer in the *Lyon Medicale* records a case where this was not to be obtained, but a piece of maccaroni did very well.

SWEDEN has one physician to seven thousand inhabitants; Italy one to three thousand five hundred; Germany one to three thousand; Austria-Hungary one to two thousand four hundred; France one to two thousand; United States one to six hundred.

FRANCIS MURPHY, the celebrated temperance apostle, is conducting a series of meetings in Cincinnati. It would seem that he has been engaged to increase the revenue of Keeley institutes, as he ascribes "salvation from drink to the grace of God and the wonderful Keeley cure."

A CAT CURE.—Cats are being extensively used in New Zealand for the destruction of rabbits. The owners of one large tract of land are so pleased with the efficacy of the new 'cure' they have given orders for five hundred cats. The antivivisectionists do not appear to object.

THERE are thirty-four thousand drug stores in the United States, apportioned as follows: Eastern states, ten thousand six hundred and forty-nine; Southern states, six thousand two hundred and thirty-nine; Central states, thirteen thousand and seventy-three, and in the Western states, four thousand five hundred and seventy-five.

THE protective bounty association is the name of a company recently founded in London, the object of which is to insure married people against twins and triplets. On deposit of five pounds the husband becomes a policy-holder, and in case his wife has twins, he will receive fifty pounds; if she is blessed with triplets, he will be paid seventy-five pounds. The society's membership is chiefly from the lower middle class.

BARON LÉON VON LENVAL, of Nice, France, offer a prize of three thousand francs for the best instrument for improving the hearing power of persons partially deaf. Instruments should be sent to Professor Politzer, president of the jury, in Vienna, before the 31st of December, 1892. The announcement of the successful competitor will be made at the meeting of the fifth international congress of otology, which will take place in September, 1893.

IN his last annual report, Dr. C. B. Burr, superintendent of the eastern Michigan asylum for the insane, adverts to the formation of matrimonial alliances between neurotic persons in the following terms: "That some sort of legal restraint must be thrown about the matrimonial union of the neurotic and feeble classes for the better development of the human race and the diminution of imbecility, inebriety, insanity, and nervous diseases, will be apparent at no remote time to our legislators, I apprehend. The tendency of the neurotic classes is to the formation of unions such as that of which I speak. I have known marriages where there was on both sides a strong inheritance of nervous instability through a long line of ancestry. That children born of such a union are but poorly equipped physically or mentally for the trials and vicissitudes of life is a fact too obvious for contention."

A NEW PROFESSORSHIP IN JEFFERSON MEDICAL COLLEGE.—At a recent meeting of the board of trustees held on Wednesday, November 30, Dr. G. E. de Schweinitz was, on the unanimous recommendation of the faculty, elected clinical professor of ophthalmology in the Jefferson medical college. At the time of his election, Dr. de Schweinitz was professor of ophthalmology in the Philadelphia polyclinic and lecturer on medical ophthalmoscopy in the university of Pennsylvania.

A NEW PASTEUR INSTITUTE.—The mayor recently laid the corner-stone of the New York bacteriological institute which Dr. Gibier is building at Ninety-seventh street and Central Park west. The building will be twenty-six by nenety-five feet, and five stories high, with a basement. It is hoped to have it completed by next January. The free treatment of persons suffering from rabies will be continued in the new institute, although it is from the treatment of private patients that the expenses of the bacteriological department will be met.

THE women of Pittsburgh have taken a decided stand for the prevention of expectoration. By ceaseless importunity they have succeeded in inducing the managers of the different street car companies to post placards prohibiting spitting in all their cars. Similar notices have been posted in the railway stations of several companies whose lines enter that city. The state board of health has prepared a notice pointing out the sanitary dangers of indiscriminate expectoration, and teachers are to be instructed to admonish their pupils not to spit in public.

ENGLISH AS SHE IS WRITTEN IN DETROIT.—The ordinances issuing from our health office are syntactical curiosities. Here is the opening sentence of one dealing with the spread of infectious diseases. "Every physician having a small-pox, varioloid, typhus fever, Asiatic cholera, glanders, erysipelas, diphtheria, scarlet fever patient, or any other contagious disease dangerous to the public health, during each and every visit to the same shall exercise all the precautions known to the profession." It would be well for every physician having "a small-pox patient or any other contagious disease" to beware of the grammarians of the health office.

ALVARENGA PRIZE.—The college of physicians of Philadelphia announces that the next award of the Alvarenga prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1893, provided that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the college on or before May 1, 1893. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award. The Alvarenga prize for 1892 has been awarded to Dr. R. H. L. Bibb, of Saltillo, Mexico, for his essay entitled "Observations on the Nature of Leprosy."—Charles W. Dulles, secretary.

THE SOUTHERN MEDICAL COLLEGE ASSOCIATION.—This is the name of a new organization perfected at Louisville on the 16th ultimo by delegates from fifteen southern medical colleges. The following officers were elected: President, Dr. J. M. Bodine, Louisville; vice-president, Dr. W. D. Haggard, Nashville; secretary and treasurer, Dr. G. C. Savage, Nashville. Resolutions were adopted extending the lecture term in southern medical colleges from two sessions to three sessions of six months each; requiring attendance on three different years; and exacting a thorough preliminary training. These regulations will take effect with the session of 1893-94.

THE city council at Hot Springs, Arkansas, has passed an ordinance licensing "drummers" for hotels, boarding houses, bath houses, drug stores, and *doctors*. The license is twenty-five dollars per quarter, and the fine for drumming without a license is twenty-five dollars per day. A law in that state provides that any doctor who employs or uses drummers shall forfeit his right to practice. The physicians who had heretofore been employing drummers recently held a meeting and resolved to endorse the ordinance, and signed obligations not to employ drummers in the future. A case testing the constitutionality of the state law is now pending, with fair prospect of the law being sustained.

A. REEVES JACKSON, M. D., of Chicago, died of apoplexy in that city on November 12. He has been prominently identified with the profession for a quarter of a century. During the civil war he served as surgeon and assistant medical director. After the war he located in Chicago and interested himself in founding the woman's hospital of Illinois, of which he became surgeon-in-chief in 1871. He filled the position of lecturer on gynecology in Rush medical college about this time. He was one of the founders of the college of physicians and surgeons of Chicago in 1882, and its president to the time of his death. He was a well-known author and teacher, standing in the foremost rank of the profession.

THE question of ethics was recently considered by the Toledo medical association. A resolution was presented to the effect—"That no member of the Toledo medical association shall be allowed to hold consultations, or to sustain any like professional relations with any practitioner of the healing art, who does not hold a diploma from a regular medical school in good standing. Any member shall be officially censured, invited to withdraw, or expelled, for violations of this rule." A discussion of this resolution resulted in the following amendment being offered: "That it is against the sense of this society that any of the members shall, except in emergency, consult with a practitioner not qualified for admission to it." The amendment and resolution were voted on and defeated.

THE medical defence association is the name of a society recently organized in Ontario. It is composed of leading practitioners throughout the province and its chief objects are "to secure the removal of recent amendments to, and other actions of, the medical act, which they believe to be objectionable to the best interests of the profession in many ways,—such as the old section number twenty-seven, giving power to make a limited tax annually upon all who pass the council's examination, for that body's proper support; the recent action of the council doubling this same disputed fee, and currently known as the 'double or quit' resolution; the issuing of a yearly license called the 'pill peddler's cer-

tificate' to practice upon conditions which the defence association considers intolerable; as also the council's action in placing in the hands of a single individual (one of its employés) the autocratic power, under certain circumstances, of cutting off the professional head of every practitioner in the province."

At a recent meeting of the Illinois state board of health the following rule was adopted: "No medical college can be held to be in good standing until it has established its claim to such standing by an active existence of not less than five years, and then only upon compliance during such period with the terms of Rule I, and by its work, and the character of its graduates as determined by the examination of the board." Several medical colleges have been started in Chicago recently, and this rule will affect them seriously. Two of the new schools are homœopathic, two evening schools—where clerks, shop-keepers or mechanics employed during the day can study medicine at night, and a college which proposes to teach medicine without didactic lectures, having recourse to clinical and laboratory instruction exclusively.

Typhoid Fever in Saint Louis.—There was an unprecedented increase in the number of typhoid fever cases reported in this city during the month of November, as compared with the preceding seven months. Fourteen cases were recorded in April; thirteen in May; thirty-two in June; thirty-five in July; seventy in August; one hundred and forty-two in September; two hundred and sixty-one in October; and one thousand nine hundred and eighteen in November. The health department has made an examination of the two thousand and eighty-six houses in which these cases occurred and found that in five hundred and thirty-four the plumbing was defective or unsanitary, and that in one thousand four hundred and seventeen the plumbing and sewerage were perfect. From this report the inference is drawn that the city water supply is responsible for the alarming increase.

Railway Surgery at the Pan-American Medical Congress.—A section of railway surgery of the Pan-American medical congress has been organized with Dr. C. W. P. Brock, of Richmond, Virginia, as executive president. A full list of officers has been provided for each of the constituent countries. At the eleventh annual meeting of the Wabash railway surgical association—the first organization of the kind—Dr. C. B. Stemen, of Fort Wayne, was by unanimous resolution requested to prepare a paper on "Organized Railway Surgery," and read the same before the section on railway surgery of the Pan-American medical congress. At the same meeting Dr. Hal C. Wyman, of Detroit, offered the following, which was unanimously adopted: *Resolved*, That each member of this association solicit his congressman to interest himself in legislation in favor of the Pan-American medical congress.

The valuation of the Cook county hospital property, located in Chicago, is estimated to be one million five hundred thousand dollars. The new wing, now nearly completed, is expected to be ready for occupancy about January 1, when ample accommodation for seven hundred and seventy-five patients will be afforded. The building comprises eighteen wards which are apportioned as follows: Medical cases, six; surgical, five; gynecological, one; obstetrical, one; dermatological, two; contagious, one; children's, one; and one closed for repairs.

The medical board and attending physicians constitute thirty-nine practitioners; while the internes number twenty, and the trained nurses sixty-seven. The employés engaged in manual work comprise eighty-eight men and sixty-two women, and their salaries aggregate a monthly expenditure of five thousand five hundred dollars. Aside from this sum the ordinary necessaries of the hospital involve an outlay of ten thousand dollars per month.

RECENT PUBLICATIONS.

REVIEWS.

GONORRHŒA AND ITS TREATMENT.*

DR. LYDSTON'S views upon venereal diseases were made known to the profession some years ago when he published an essay upon the "Evolution of the Local Venereal Diseases." The present volume is in amplification of these views. Dr. Lydston is a ready writer, and has produced a readable and attractive book.

* By G. Frank Lydston, M. D., professor of the surgical diseases of the genito-urinary system and syphilology in the Chicago college of physicians and surgeons. The Physician's Leisure Library. Paper, 25 cents; cloth, 50 cents. Geo. S. Davis, Detroit.

THE MASTOID OPERATION.*

DR. ALLEN has written an exceedingly complete and forcible monograph upon the mastoid operation. He details with much exactness the history of the operation, the methods of performiug it, and its pathological and anatomical features. The book is amply illustrated, printed and published in excellent style, and will be valued by specialists and general practitioners for its lucidity and completeness.

* Including its history, anatomy and pathology. By Samuel Ellsworth Allen, M. D. Robert Clarke & Company, Cincinnati.

THE STUDENTS' QUIZ SERIES.*

THREE additional numbers of the new series of quiz-compends, now being issued by Messrs. Lea Brothers & Company, are before us. The excellence of the series is fully maintained in its present representatives. Brief and pithy summaries of the essentials of the study with which they deal, they are admirably adapted to the purposes of the student or practitioner.

* Gynecology: A manual for students and practitioners. By G. W. Bratenahl, M. D., and Sinclair Tousey, M. D.

* Histology, Pathology, and Bacteriology. By Bennett S. Beach, M. D.

* Practice of Medicine. By E. T. Doubleday, M. D., and J. Darwin Nagle, M. D. Price: cloth, $1.00. Lea Brothers & Company, Philadelphia.

A READY-REFERENCE HAND-BOOK OF DISEASES OF THE SKIN.*

A VERY concise and convenient manual of diseases of the skin has been prepared by Dr. G. T. Jackson, of New York. The diseases have been arranged alphabetically and therefore are convenient for ready reference. The large number of synonyms in foreign language is also a useful feature of the book. The prescriptions are both in troy and decimal weights. The work will be found among the best of recent manuals.

* By George Thomas Jackson, M. D., chief of clinic and instructor of dermatology, college of physicians and surgeons, New York; professor of dermatology in the woman's medical college of the New York infirmary. In one handsome duodecimo volume of five hundred and thirty-four pages, with fifty engravings and a colored plate. Cloth, $2.75. Philadelphia: Lea Brothers & Company, 1892.

INTERNATIONAL CLINICS.*

THE last three numbers of "International Clinics," now on our table, have unfortunately escaped notice at the time of their issuance. It would seem that each succeeding number is, if that be possible, better than its predecessor. The series is vitalized by a clinical spirit as thorough and complete as is possible in the absence of the clinical subject. The volumes before us contain lectures by many of the most noted clinical teachers on this and the other side of the Atlantic. Michigan readers will find much to interest them in the lectures of teachers near home. The first series is now concluded and it is to be hoped the profession will support the new series as substantially as the enterprise deserves.

*A quarterly of clinical lectures. By professors and lecturers in the leading medical colleges of the United States, Great Britain, and Canada. Edited by J. M. Keating, M. D., Philadelphia; J. C. Griffith, M. D., Philadelphia; J. M. Bruce, M. D., London, England; D. W. Finlay, M. D., London, England. Philadelphia: J. B. Lippincott & Company.

A MANUAL OF MEDICAL JURISPRUDENCE.*

THE eleventh edition of this standard work on medical jurisprudence will be welcomed by the profession. The work is thoroughly modern and traverses the whole medico-legal field, and includes in its comprehensive sweep, the legal relations of the physician to evidence, poisoning, wounds and personal injuries, drowning, hanging, strangulation, lightning, cold, heat, starvation, pregnancy, criminal abortion, infanticide, birth, inheritance, legitimacy, paternity, impotence, sterility, rape, insanity, and life insurance. The modern tone of the work is appreciated by reading the chapter dealing with electrical injuries. The chapters on poisoning are among the most valuable in the book and will be of the greatest assistance to both physicians and lawyers in poisoning cases.

The physician frequently plays a sorry part as a medical witness, and it would be well should medical jurisprudence take a more prominent place in the medical curriculum. Those whose education may have been neglected in this respect cannot do better than provide themselves with this work. Legal medicine is by no means the least interesting branch of medicine and its study will be attended with profit and satisfaction.

*By Alfred Swain Taylor, M. D., F. R. S. Revised and edited by Thomas Stevenson, M. D., London. Eleventh American, edited with citations and additions from the twelfth English, edition, by Clark Bell, Esq., president of the American International medico-legal congress of 1893. Seven hundred and eighty-seven pages; fifty-six illustrations. Price: cloth, $4.50; sheep, $5.50. Lea Brothers & Company, Philadelphia, 1892.

REFERENCES.

PAMPHLETS AND NOTES.

"Two Cases in Abdominal Surgery." By Eugene Boise, M. D. Reprinted from *New York Journal of Gynecology and Obstetrics.*

"Combined Gynecological Operations." By George M. Edebohls. Reprinted from *American Journal of Medical Sciences.*

"Report of the Board of Trustees of the Eastern Michigan Asylum for the biennial period ending June 30, 1892."

"Colpo-Perineorrhaphy." By Edward W. Jenks, M. D. Reprinted from *Journal of the American Medical Association.*

"The Effect of Diseases of the Ear upon the General Condition." By William Cheatham, M. D. Reprinted from *Medical and Surgical Reporter.*

The United States Pharmacopœia, 1890, which will be published during 1893, adopts in great measure the metric system of weights and measures. This will doubtless create much confusion in the minds of physicians and druggists, and lead to many misunderstandings and errors. In order to provide a guide to the proper dosage, etc., Dr. Geo. M. Gould, author of "The New Medical Dictionary," has prepared a very complete table of the official and unofficial drugs, with doses in both the metric and English systems. This table is to be published in P. Blakiston, Son & Company's "Physicians' Visiting List for 1893," together with a short description of the metric system.

Messrs. Lea Brothers & Company, of Philadelphia, announce that they will shortly issue "A Text-Book of Nervous and Mental Diseases," by Landon Carter Gray, M. D., professor of diseases of the mind and nervous system in the New York polyclinic. Octavo: about eight hundred pages, richly illustrated.

MEDICAL PROGRESS.

MEDICINE.

DOES MERCURIAL TREMOR EXIST?

THE *Journal des Connaissances Médicales*, July 7, 1892, publishes an interesting lecture recently given by Charcot at the Salpêtrière, and reported by Paul Blocq. Three cases of intention-tremor were presented to the class, one due to multiple sclerosis, the others to what is usually supposed to be mercurial poisoning. Mercury has had a bad name from antiquity down, and has been credited

with causing numerous ills. To it are attributed various physical disturbances among fur-workers, hatters, mirror-makers, and gilders on wood. Mercury has been accused of remaining in the tissues, notably in bone, whether introduced by the mouth, lungs, or absorbed by the skin; and according to popular belief, an autopsy would reveal the shining "half-metal" making bright lines or dots in osseous structures. Yet Virchow has never found traces of this popular cause of terror in any human bones. And mercurial tremor? While frequent among those whose profession, so to speak, has poisoned them, there are no records among syphilographers concerning tremor as the result of taking mercury. In shops where mercury is used, seven or eight years of service generally elapse before this symptom appears. When it shows itself in one particular individual, the experienced foreman promptly dismisses the victim, knowing well how rapidly others will be attacked unless this extreme measure is adopted. Charcot concludes that there is no such thing as mercurial tremor, and that the intention-tremor, said to be due to poisoning by mercury, is in reality hysterical, occurring in persons who have developed, or possibly originated, the hysterical state through close confinement, long hours, unhygienic surroundings, and the over-exercise of limited faculties. Dutil has made a special study of hysterical tremor, visiting shops and making examinations of five cases of mercurial tremor, so called, that were found there. In three there were hemianæsthesia, hysterogenic zones, and hysterical attacks, the latter often the precursor of tremor. With hysterical stigmata, as corroboratory evidence, the diagnosis of such cases is plain. And when classic stigmata are absent? Tremor itself is a stigma. There is a mono-symptomatic hysteria, as well as other forms. In tonic hysterias, in which some poison is the predisposing cause, the nature of the agent seems to exercise some special influence upon its particular kind of manifestation. Lead gives chiefly anæsthesias and paralyses; alcoholism, convulsive crises; and mercury, in particular, this rare form of neurosis, tremor. This newer view of mercurial tremor alters routine treatment. Iodine and vapor baths give way to mechanical tonics—as the douche, shower, and pack—to gymnastics and massage, and to nervine tonics.—*New York Medical Record.*

LAWS OF PERIODICITY IN INEBRIETY.

Dr. T. D. Crothers states that drink periodicity follows certain laws (*Journal of the American Medical Association*), and concludes as follows:

(1) The periodicity of the drink paroxysm is unquestioned, evidence pointing to central brain lesion.

(2) Heredity, nutrition, mental exhaustion and environment are all very common causes, or predisposing factors, of this condition.

(3) Allied diseases, of which epilepsy is very common, are associated with this, and similar affections are interchangeable.

(4) The drink periodicity follows a uniform line of events ending about the same way in nearly all cases. Its varieties and symptomatology are practically the same in the regularity of origin, development and termination.

(5) These cases are the most certain and dangerous of all drink neurotics, and are the least understood. The prognosis is uncertain and full of dangerous possibilities and the natural tendency to death.

(6) These cases are very susceptible to treatment when the measures are applied scientifically and with full knowledge of the causes. Their inebriety is more positive than that of other inebriates. The drink impulse is often controllable and frequently disappears with treatment. This class requires the most careful medication and study.

(7) Medico-legally the most important problems are associated with these drink paroxysms. Each case requires special study and is to be judged from general principles of physiology and psychology.

(8) Such cases of necessity have impaired nerve control and cannot be measured by the rules or standards of mental health.

(9) All these cases should receive careful study and examination. Tabulated facts of sufficient number and accuracy are needed from which to draw accurate conclusions covering the laws which govern this class of neurotics. Their curability is assured when the causes are known and by the application of means known to science.

FRAU GELLY: A UNIQUE THROAT SUBJECT.

FRAU GELLY enjoys the probably unique distinction of being the only person engaged in her occupation. Nearly every medical visitor to Vienna within the last ten years will remember her. She is employed as a nurse in Schnitzler's throat clinic in the general hospital and acts as an assistant instructor; but her forte lies in hiring herself out to medical men as a subject upon which to practice laryngology and rhinology.

She comes to your room by appointment and brings all her own instruments. If you are a beginner, she explains the proper position for patient and physician, the adjustment of the forehead reflector, and the introduction of the throat mirror. Her throat is so insensitive that even the most awkward manipulations produce no gagging or other reflexes. She is able to tell whether the throat mirror is in correct position and to guide your[1] and so that you *must* see the vocal cords. She next points out with a probe the different structures to be seen. The next step is for the student to paint the larynx with some bland solution, and after that to touch the different parts with the probe as if applying a solid caustic. When you have become quite expert she introduces a glass bead so that it rests on one vocal cord and lets you remove it with Schrötter's forceps. The amount of confidence she has in your dexterity is indicated by the fact that she keeps a very tight hold of a thread attached to the bead.

Passing on to the nose, you are given practice in making applications with a brush or probe to the different fossæ, in passing a catheter into the Eustachian tube, and in posterior rhinoscopy. It gave me a very queer sensation the first time I saw her introduce the Eustachian catheter herself.

Frau Gelly has the reputation of being crafty. At the first lesson you can not help seeing every portion of the larynx, but as you become more expert she makes it more and more difficult, until finally she is worse than the most refractory dispensary patient. Her object is apparently to show you the necessity for an indefinite continuance of the sittings. But it is just at this point that most men stop.

Last year an American physician was working in Vienna on a modification

(not yet published, I believe) of O'Dwyer's tubes, and during his experiments he intubated Frau Gelly's larynx a thousand times.

She receives about eighty cents an hour and is harder to make an appointment with than Professor Bilroth. When she does make an appointment she never intends to keep it, but makes her appearance a week or two later.

Why should not New York produce a Frau Gelly? There are students enough in the post-graduate medical schools to render the occupation profitable if not agreeable.—Dr. Sinclair Bousey, in *New York Medical Journal.*

THE DISEASES AND INCIDENTS OF GREAT CROWDS.

THE medical history of the great Columbian celebration, which produced so much enthusiasm in this city last week, deserves some attention, and if it could be completely written would prove most interesting. There were probably four hundred thousand or five hundred thousand visitors during the week and perhaps a quarter of a million persons crowded the streets along which the parades were held. It is estimated that two hundred persons were more or less hurt or taken ill. The census as gathered by newspaper reporters from the police reports and hospitals makes the number about one hundred. Our readers will be interested in the list, as showing the accidents and diseases of great crowds. It is as follows:

Fainting, thirty-five; hysterical seizures, three; epileptic fits, eleven; sprains, three; run over, three; fractures ten—one of the arm, two of the skull, seven of the legs; falls, eleven; cramps, one; dislocation, one; burned, mortally, one; struck by a brick, one; "taken sick," thirteen. Total ninety-four.

This shows that fainting is the most frequent pathological phenomenon, that crowds are bad for epileptics, that falls and fractures are numerous, and that delicate people are liable to be "taken sick." On the whole, the record is not a bad one, considering the enormous congregation of people. The reports also show that the sick and injured were promptly and efficiently cared for; and our much abused ambulance service evidently did yeoman's duty on that occasion. —*Medical Record.*

SURGERY.

SHOCK AND ITS TREATMENT.

KOTTMANN (*Wiener med. Presse*, 1892, Number XXI, from *Correspondenzblatt für Schweizer Aerzte*) states that the most important signs of shock are weakness of the heart, faint respiration, skin pale and covered with cold sweat; face drawn out, sunken eyes and livid lips; consciousness remains; sensibility reduced. Shock appears when certain very sensitive organs, as testicles, bones, or bowels, have been subjected to contusion or other serious injury. Shock may occur from hæmorrhage, and is then associated with functional changes in the body of which there are no post-mortem evidences. Two theories are advanced: the first defines shock as a reflex paralysis of the heart and vessels caused by the trauma. According to the second the injury causes, reflexly, exhaustion of the medulla oblongata and of the spinal cord, and, as the nerve centres are affected,

there is debility of heart and respiration. The fever which accompanies shock is, according to Kottmann, the consequence of trauma. The substances causing the fever are here chemical, and not bacterial, are freed from normal tissue matter by the injury, and include hæmoglobin, fibrin firment, and similar elements. The author objects to confounding shock with debility due to hæmorrhage. In the latter there is rapid pulse, quick, deep, panting respiration. In shock, the patient does not present the evidences of cerebral irritation, noises in the ears, affected vision, palpitation, yawning, and even convulsions. In severe cases of shock the usual remedies—alcohol, ether, caffeine, and camphor—may be used without relief. The similarity in the appearances resulting from hæmorrhage and from shock induced Kottmann to use salt-water transfusion in four cases, with good results. By the neuro-pathological theory the explanation is that the effect of the salt solution is to stimulate the centres with which it comes in contact, and with increased arterial pressure the central nervous system would receive more blood and recuperate more quickly. If the hæmo-pathological theory is accepted the explanation is even more simple: the salt-water would fill the empty heart and vessels, and the hydraulic requirements would be fulfilled while the blood in the distended abdominal vessels was being restored to the circulation. Patients suffering from shock often require severe operations, especially the amputation of members. Experience shows that chloroform anæsthesia in these cases is attended with unusual danger; which is less with ether, which acts as a heart stimulant.—*American Journal of the Medical Sciences.*

SYMPHYSIOTOMY.

At a meeting of the Philadelphia county medical society held on October 12, Dr. Barton Cooke Hirst read a paper on this subject, in which he said: Symphysiotomy has as remarkable a history as any procedure in surgery. Suggested for the first time in the "Surgery," published by Pineau in 1598, and first performed upon a living woman in 1777, the idea may be said to be three hundred years old, while its practical application dates back more than a century. From the year of the first operation until 1858 symphysiotomy was performed eighty-five times in different parts of the continent of Europe and once in England, with a mortality of thirty-three per cent. The frequency of the operation diminished after the first few years, until in 1858 it had practically died out. It was revived, however, in Italy in 1866, and in the succeeding twenty years seventy operations were performed with a mortality of twenty-four per cent. Italy continued to be the exclusive field of the operation until a year ago, when it was again tried in Paris by Pinard, whose interest in it was aroused by a visit of Spinelli from Italy. Ten operations have since been performed in Paris, two in Dresden, and one in Strassburg. From January 1, 1886, there have been fifty-two operations with only a single death, due to septic infection before the operation was undertaken. Twenty-three symphysiotomies have been done already this year, and the last thirty-four women have all recovered.

We owe the introduction of symphysiotomy into this country to Dr. Robert P. Harris, who, as is well known, has long been interested in the subject, and at the recent meeting of the American gynecological society in Brooklyn, read a paper tracing the development of the operation, showing by the most laboriously

collected statistics the present brilliant results achieved by it, and demonstrating, by the description of typical cases, its utility in labors otherwise insuperably obstructed by a contracted pelvis.

Ten days after Dr. Harris's paper was read, on September 30, the first operation in this country was performed by Dr. Charles Jewett, in Brooklyn. Three days later it was again performed at the maternity pavilion of the University hospital in this city [Philadelphia].

The position of symphysiotomy is now established beyond a doubt. Its modern revival I believe to be the most important advance in obstetric surgery since the general adoption of abdominal section for the treatment of early extra-uterine pregnancy. It is applicable in contracted pelves with a conjugate over sixty-seven minimums, and therefore should be the method employed in almost all the cases of the kind in this country, for a greater contraction of the pelvis is rarely seen among us. It should, moreover, almost entirely displace the Cæsarean section for a relative indication. It is a much simpler and easier and a safer operation. This is also the opinion of Leopold, who cannot be accused of prejudice against Cæsarean section, with his brilliant record in that field.

There is and will be for some time, perhaps, an objection to the operation from those who have no experience with it, on the ground that sufficient space cannot be thus gained. In answer to this objection is the fact that the pubic bones may gape seven centimetres after their separation, and the statement of Morisani that the conjugate is thereby increased from one and three-tenths to one and five-tenths centimetres.

[Dr. Hirst then gave brief histories of six cases of symphysiotomy, including Dr. Jewett's and his own, and proceeded as follows:]

The technique of symphysiotomy is simple and easy. After thoroughly cleansing the field of operation and disinfecting the vagina as well, a short vertical incision is made on the abdominal wall, reaching to about three-quarters of an inch above the symphysis. The attachments of the recti muscles are severed just sufficiently to admit one finger. The forefinger of the left hand is passed under the symphysis, and upon this as a guide the curved knife of Galbiati is inserted until its beak projects under and in front of the symphysis. The joint is then cut upward and outward. To avoid injury to the urethra, a metal catheter is inserted and pressed by an assistant downward and a little to the right, while the knife is placed a little to the left; but with Galbiati's knife I should think that there was little likelihood of cutting the urethra or the plexus of veins in its neighborhood. I at first thought that an ordinary probe-pointed, curved bistoury would serve my purpose well enough, but I quickly laid it aside, and was glad to avail myself of Galbiati's knife which I happened to possess—at the time one of the three, I believe, in the country.

As soon as the joint has been severed, the wound should be covered with iodoform gauze, and then the child extracted with forceps, or allowed to be expelled naturally, as seems best in the individual case. I should, I think, almost always prefer the forceps. It is well to have the trochanters supported by assistants during the passage of the child through the pelvis, so that the sacro-iliac joints shall not be injured.

As soon as the delivery is completed the wound is sewed up, the lowest stitch, if desired, passing through the top of the symphysis. How the whole symphysis

can be stitched up, as Leopold professes to have done, I do not understand. After closing the wound and dressing it, rubber adhesive strips are placed around the hips and the lower abdomen, and a tight binder is applied. The symphysis unites surprisingly soon, and three weeks after the operation the patient can walk as firmly and as well as ever.

There is only one disturbing thought in connection with the introduction into this country of an operation destined to do so much good. The charge of superficiality lies with some justice against us. We are too ready to reach out toward the top without a sufficient basis of solid preparation, and I fear that symphysiotomy may be undertaken by many who cannot correctly measure a pelvis and who have not the experience to decide whether a head can pass through the pelvis into which it is about to enter or in which it is engaged. There is consolation, however, in the reflection that, if symphysiotomy should be done needlessly, the results are not likely to be so disastrous as in the case of Cæsarean section, which, to my knowledge, was done several times unnecessarily during the excitement produced among medical men by the improved results of the Sänger operation.—*New York Medical Journal.*

GYNECOLOGY.

RELATIONS OF PELVIC DISEASES TO PHYSICAL DISTURBANCE IN WOMAN.

At the meeting of the American association of obstetricians and gynecologists, Dr. George H. Rohé, of Catonsville, Maryland, read a paper upon "The Relations of Pelvic Diseases to Psychical Disturbances in Woman." The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that disease of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject the following report was submitted:

In a hospital containing two hnndred insane women, thirty-five were subjected to vaginal examination and twenty-six found with evidences of pelvic diseases. In eighteen of these the uterine appendages were removed with the following results:

Sixteen recovered from the operation and two died. Of the sixteen recovered, three have been discharged from the hospital completely restored, both physically and mentally. In ten considerable improvement followed the operation in both physical and mental conditions, and in three the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the eighteen cases was melancholia in six cases, simple mania in one, puerperal mania in four, hysterical mania in one, periodic mania in two, hystero-epilepsy with mania in one, and epilepsy with mania in three.

The author basing his opinion upon his experience, concludes as follows:

"The facts recorded demonstrate first, that there is a fruitful field for gynecological work among insane women; second, that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere; and third, that the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

TWENTY-FIVE CASES OF EXTIRPATION OF THE UTERUS FOR CANCER: A CONSIDERATION OF ULTIMATE RESULTS.

Dr. Charles A. L. Reed, of Cincinnati, presented to the recent meeting of the American association of obstetricians and gynecologists a report of twenty-five cases of complete vaginal extirpation of the womb for cancer with only two primary deaths—one from shock and one from iodoform poisoning. Of the twenty-five operated upon but fourteen were of more than two years' standing, and hence were all that could be discussed with reference to their ultimate results. These fourteen were divisible into two classes of seven each, namely, those in which the disease had existed for more than six months before the operation, and those in which it had existed for less than six months before the operation. Of the first class, that is, those of more than six months' (an average of ten months) previous duration, all were dead; and of the second class, that is, those of less than six months' (an average of four months) previous duration, only one has since died. One of the recoveries is of more than five years' duration. The conclusion from these figures is that cases of cancer of the uterus ought to be remanded for operation as soon as diagnosed.

Dr. Reed looks upon total extirpation as the only operation to be advised or practiced in these cases, the primary mortality from which, in experienced hands, varies from five to eight per cent.

THERAPEUTICS.

THE THERAPEUTICS OF FALLING OF THE HAIR.

Dr. H. Paschkis (*Centralblatt für die Gessammte Therapie*, June, 1892,) thinks hair-dressers and barbers are the ones consulted usually by people suffering from a loss of hair. As long as the cause is only skin deep the remedies usually applied are frequently successful, although the most unsuitable remedies are often used with fidelity before the sufferer decides to consult a physician. Paschkis does not attempt to name all the diseases of the scalp, but only those which occur most frequently. It is well known that many skin-diseases, when they attack the scalp, lead to a loss of hair, chiefly confined to the diseased places. The prognosis of such cases usually depends in the depth to which the disease has reached. Of course, it is most favorable when the disease is superficial, affecting only the epidermis, as, for example, in psoriasis vulgaris, which often exists for years without causing any loss of hair worth mentioning.

Besides the local there are often general diseases which lead to the loss of

hair. Midway between the local and special troubles is erysipelas. Here the loss of hair has a double cause. It is locally caused by the erysipelas making an inflammatory infiltration and thickening of the scalp, which leads mechanically, and by the hinderance of nourishment, to the falling of healthy hair. On the other hand, this is also caused by the general decrease of nourishment following an acute infectious fever, and also by a temporary atrophy of hair-follicles and the hair itself.

Sometimes the hair falls when the erysipelas has not invaded the hair. The cause is here the same as when it falls after any other fever. In all these cases the falling of the hair is stopped by the cure of the disease. In chlorosis, arsenic does specially good service, without our being able to ascribe to it any direct action upon the scalp.

Other forms of falling hair may be divided into two groups. The first comprises those in which the fall is caused by seborrhœa of the scalp, and therefore through hypersecretion; the other, those in which simple formation of scales, pityriasis, and insufficient secretion of the sebaceous glands, is present.

In the first, the hair is oily, shiny, apparently thick, with great quantities of small and large scales in it. These forms are best treated by the use of the usual remedies and numerous preparations, as far as these are not fatty or pomades, for the fat needs to be removed. Washing with alkaline soaps is valuable. Of these, the spiritus saponis alkalinus is often not well borne, and Paschkis commends instead of it one of the many so-called medicated soaps which are soluble in water, and then can be mixed with some soda or potash (one to one and a half ounces of soap to two and a half drachms of soda, dissolved in one pint of water). Gude's fluid soap, with the addition of one per cent. of carbonate of potassium, is also useful. Ten to fourteen washings in fourteen days will often produce surprising results. According to the intensity of the attack, the soap is to be rubbed in with more or less energy, and the lather allowed to stay on from ten minutes to several hours. The washing with soap is often quite difficult for the long hair of women, felting the hair together. In such cases the lather must not remain, but rubbings of from one-fourth to one-half an hour be used, or else a simple two to five per cent. solution of caustic soda. Soap and alkalies rapidly remove the fat from the hair, making it appear lighter in color or gray. These evils can be removed by further measures, such as oiling. While these substances dissolve and remove the oil from the hair, alcohol simply dissolves it. The action of most hair-tonics is due to the strong alcohol contained in them, which has the same fault as the alkalies, as it produces brittleness, and besides, even when very concentrated, does not entirely remove the fat.

Ether, which does remove the oil, is unpleasant to many on account of its odor. Paschkis uses instead of this benzol (not petroleum, but coal-tar benzine, fifty parts to one hundred of absolute alcohol). Both of these must be used only by daylight. In many cases all of the remedies mentioned failed. The many aromatic remedies should then be tried. Often a good result may be obtained from a one to three per cent. solution of naphthol in alcohol; from a concentrated resorcin solution (resorcin, five parts, alcohol, one hundred and fifty parts; olei ricini, two parts); less frequently from salicylic acid. Tar is only occasionally of use, although it and β-naphthol are used with great advan-

tage as soaps. They are to be used just like the alkaline soaps. But these remedies are far surpassed by ichthyol, which Paschkis has used with excellent results for two years. It can be had as a soap or a salve, ten or twenty per cent. strength, with lanolin. The use of the salve must be preceded by at least one energetic washing with the soap.

Dilute mineral acids may often be applied with benefit, not as washes, but simply rubbed in; best of all with a small sponge. Occasionally Burow's solution, much diluted (one to ten to twenty), and freely rubbed on the head and allowed to dry, is excellent.

But all these remedies are really only preparatory to the use of tonic and preservative remedies, the use of the fat-reducing substances to be continued in milder form.

Tannic acid and quinine are valuable in the form of an alcoholic solution, rubbed in the scalp every night; sometimes the pomade is also good.

Balsams are slightly astringent and tonic, but must be carefully used. The pomade prepared by Hebra is good for the trial (bals. peruv., two parts; ungt. pomade, eighty parts). Sometimes a remedy which is useless alone is valuable in combination, so balsam may be combined with acids with good results. But these preparations, if concentrated, are often the cause of bad headache, and are only valuable when diluted.

If the patient is a docile one, the prognosis of seborrhœic alopecia is favorable. It is necessary that the patient visit the physician from time to time. The treatment must be continued for months. Often a slight interruption causes the disease to return with almost the original severity.

The cure of all other forms is much more difficult.

When the scalp is dry and badly nourished, the use of soap is out of place. For these cases oil and pomades are to be used to make the skin more pliant and elastic, and the light massage of rubbing them in is also valuable.

Lassar's cure should be mentioned here. It consists in soaping the scalp with an alkaline or tar soap, then in rubbing with a two-tenths of one per cent. watery solution of corrosive sublimate in alcohol, after which the head should be rubbed dry with sprits of naphthol, and finally with a two per cent. salicylic acid oil.

Lassar proposed this methodical treatment in view of the supposed parasitic nature of most alopecias. In seborrhœic and atrophic alopecias it may be used, but in the latter cases Paschkis either omits the washing with soap or uses it less frequently, and chooses a mild soap, using instead of these spirits and oil with quinine, tannin, balsam, etc. If everything else fails, stimulating remedies should be used,—tincture cantharidis, two or three parts to fifty of an alcoholic tincture; olei savinæ, ten to fifteen drops to fifty parts alcohol and Cologne. These are to be vigorously rubbed in the scalp daily, or three times a week, with a brush or sponge. For a change, or to mollify the irritating action of these remedies, an energetic application of oil may be made immediately following the other. Many of these cases are combined with hyperidrosis. Perhaps both are of nervous origin. If an excessive secretion of perspiration is noted, it must be stopped if possible. Hyperidrosis alone should have, besides the treatment mentioned, a mild massage of the scalp and internal treatment with iron and arsenic, to improve the general condition.

To the most unpleasant, unsightly cases belong those atrophic alopecias, in which coarse, thick hairs are found on a dry scalp without baldness. These cases are practically hopeless.

There is also not much hope where young men become prematurely bald at the same age at which this occurred to their fathers. Here one thinks it inherited rather than of an infectious nature. This hereditary alopecia rarely attacks girls. Perhaps because these give more attention to the care of their hair, and wear more suitable, better ventilated head-gear.

Pilocarpine he has never seen produce cure by external or internal use. Alopecia demands, according to its nature in each case, disinfecting or stimulating remedies, but therapeutics are powerless; its rare cure results not from medication, but spontaneously.—*Therapeutic Gazette.*

INFLUENCE OF WINE UPON THE DEVELOPMENT OF TYPHOID AND CHOLERA BACILLI.

Dr. Alois Pick (*Centralblatt für Bakteriologie*, XII, IX) says that for a long time it has been recommended during typhoid fever and cholera epidemics that wine be added to the drinking-water. Filled with a desire to test this generally-accepted view by precise bacteriological experiments, Pick made a number of experiments in the hygienic institute in Vienna in the following manner:

First, fresh supplies of typhoid and cholera bacilli were prepared; then five Erlenmeier bulbs were filled with water, wine, and equal parts of water mixed with wine. Number one held five drachms sterilized water; number two, two and a half drachms white wine and two and a half drachms water; number three held five drachms white wine; number four, two and a half drachms red wine and two and a half drachms water; number five, five drachms red wine; each with a quarter of a drachm of typhoid or cholera deposits added. Of each of these mixtures, after standing one-quarter to one-half hour, a scoopful was placed in gelatin, agar-agar, and bouillon. After the lapse of twenty-four hours, inoculations were made in the same manner. These showed that, after a short action of the thinned wine, or wine mixed with equal parts of water, there was a marked decrease in the number of surviving germs of the typhoid bacilli. After an action of twenty-four hours, not a single colony of the typhoid bacilli developed, although the water tests showed in both cases great quantities of colonies.

In still greater measure was shown the action of the wine, or the wine and water, upon the development of the cholera vibrios, for after an action of but from ten to fifteen minutes, no living vibrios could be found. The same result followed the twenty-four hour action. During a prevalence of a typhoid or cholera epidemic, it is, therefore, advisable to add to the drinking-water an equal quantity of wine, and it will be an object of further investigation to determine how far the thinning of the wine may be carried, and how long these mixtures should be allowed to stand, in order to be certain that the germs of typhoid or cholera contained in the water are entirely destroyed. It will also be advisable only to drink the wine from vessels in which it has already stood for twenty-four hours, and to mix the water and wine twenty-four hours before its use.—*Therapeutic Gazette.*

INJECTIONS OF AMMONIO-CITRATE OF IRON IN CHLOROSIS.

Dr. Alvazzi, of Turin, has successfully treated chlorosis by means of injections of ammonio-citrate of iron. For three months various preparations of iron had been given in considerable doses without benefit, and the patient had become so weak as to be unable to leave her bed. The red corpuscles, which were pale, averaged four million per cubic millimetre, and there was slight leucocytosis. As the internal administration of iron had failed, it was determined to try injections of the ammonio-citrate according to the following formula:

℞ Ammonio-citrate of iron, . . . gr. xvij.
Distilled water, ...
Laurel water, ... āā ʒj¼.

Misce.

The injections were given with an ordinary Pravaz's syringe. One-sixth of a grain of the salt was given once a day, the amount being gradually increased till on the ninth day it had reached two grains, still given in one injection. On the sixteenth day, no ill effects having been observed, two injections of two grains each were given each day, and after thirty days the patient was discharged cured. Two or three of the injections were given under the skin, but this having on each occasion caused severe pain, all the others were made into the substance of muscles. The injections were given with strict antiseptic precautions, and were always followed by somewhat vigorous and prolonged massage at the seat of injection. Pain seldom lasted long, and no abscesses or even swelling followed the injections, nor did the temperature rise. When discharged, the red corpuscles had recovered their natural color, and averaged four million three hundred and fifty thousand per cubic millimetre, and the proportion of white corpuscles was normal. The hemoglobin had risen from thirty-five to over ninety-five, and the girl's weight increased from seventy-two to eight-four pounds. Her appearance and general health had improved immensely.—*Medical and Surgical Reporter.*

PEDIATRICS.

APPENDICITIS IN CHILDREN.

Four cases are reported in an interesting paper by Perret (*Lyon Médical*, 1892, tome LXX, Number XXVI, page 279). The first two occurred in girls of eleven and a half and twelve and a half years respectively, and both recovered under a purely expectant treatment. The third and fourth cases, both fatal, are particularly valuable because of the autopsies, which, taken in conjunction with the physical signs observed before death, shed some light on the question of surgical intervention.

Of these two cases the first concerned a girl aged six years, sick about ten days before coming under observation, with general malaise, pain in the abdomen, headache, diarrhœa for the preceding two days, but no vomiting. The belly was uniformly swollen and painful, with some increased tenderness in the right hypochondrium. No fluctuation or dullness could be made out. Stools

were frequent, liquid, of a yellowish color, mixed with some clear glairy mucus, but no blood; tenesmus. Pulse very small, temperature 104 3–5°. The next day sudden vomiting came on, and death supervened in three hours. On opening the abdomen the peitoneum and intestines were found injected, with numerous patches of false membrane between the coils; quite a quantity of blood-stained effusion and free pus in the true pelvis, and upon its sides. The appendix, of the size of the little finger, was found extending upward and behind the cæcum, to which, however, it was not adherent. There was no perforation or ulceration, but its lumen was dilated, and at its terminal portion contained healthy pus.

The other case occurred in a girl of seven years. The history showed that a year before she had had a fall upon the right side followed by severe pain in the right iliac fossa. A second attack of pain in this location, with constipation and several attacks of vomiting, had occurred two months before the last illness, and had lasted two or three days. Four days before observation, without appreciable cause, she had been seized with sudden and violent pain in the same position as before, with repeated vomiting and absolute constipation, attended by extreme general abdominal tenderness, especially marked in the right iliac fossa, but without any appreciable dullness of fluctuation under the most careful and repeated examination. In this case the continued aggravation of the symptoms led to surgical invention, and several incisions were made, free pus being obtained from a median incision. The appendix was removed and proved to be reddened and swollen, and showed a perforation. The true pelvis also contained pus, which was partly evacuated by a counter-opening through the vagina. The child died of exhaustion several days after the operation, and the autopsy showed a small pocket between the omentum and transverse colon which had escaped the knife.

These four cases of appendicitis permit of division into two distinct classes; the first two being acute, with a circumscribed peritonitis; the last two, also acute, with a more or less immediately generalized peritonitis.

These last two cases prove most conclusively that the absence of dullness to be demonstrated in cases of general peritonitis does not disprove the presence of liquid or purulent effusion, and is, therefore, not a contra-indication to operation, for the pus may be more or less diffused in patches, or collected in small foci imprisoned by recent adherences, or accumulated in the pelvis, and thus escape detection by the most careful examination. Added to this is the fact that in the case of children Tripier's sign can scarcely be evoked as a help in doubtful cases.

These observations, therefore, show that it is necessary to establish a clear distinction between appendicitis with circumscribed peritonitis and appendicitis with peritonitis at once or rapidly generalized. In the former cases the author advises a purely medical treatment, with careful watching, being ready to operate if any accident occur, or when general or local signs render very probable the existence of a focus of suppuration. In the other cases he thinks that it is necessary to operate at once without being deterred by the apparent absence of effusion. The incision should be large, and, if necessary, several incisions should be made, so that no concealed focus of suppuration may escape.—*Journal of the American Medical Sciences.*

THE EARLY DIAGNOSIS AND EARLY TREATMENT OF ACUTE ANTERIOR POLIOMYELITIS.

WITHOUT going into details regarding the muscle groups usually involved, it may be said that the cervical and lumbar enlargements of the cord are the preferred locations for the central lesion, and drop wrist and drop foot the most usual result, with pronounced tendency to contractures and flexion at the knee, hip and elbow. The limb is rarely so completely involved as to result in a permanent fluid-like appendage. The essentials for an early diagnosis are: a slight fever, local tenderness, flaccidity of muscles and a failure to respond to a faradic current strong enough to cause contraction in the sound limbs. The tendon reflexes are abolished also very early, but as they are difficult to obtain in infants their investigation has not been insisted upon.

If one is fortunate enough to make the diagnosis during the fever, salicylates or mercury may be advisable. At this time the child should be kept as much as possible on the side or face, and very mild sinapisms to the spine with brisk catharsis seem indicated, as well as other measures of proved value in myelitis. After this stage the greatest help can be afforded in the way of preventing deformities by maintaining normal positions and relations in the affected extremities. The next item of importance is to maintain the nutrition of the paralyzed muscles until the trophic influence of the cord is restored, that it may find all conditions favorable for its usually much impaired activity. This is to be accomplished, except in the muscles whose central apparatus has been completely destroyed by the disease, by means of massage, frictions and electricity, for which it is their only indication. Frequent sponge bathing is also beneficial. The use of strychnia can only be of value by its tonic action and its physiological effect on the cord. Any subnormal condition of the general health, and any dyscrasia, lack of hygienic surroundings and of proper diet should receive early and persistent attention.—Archibald Church, M. D., in *Cincinnati Lancet-Clinic.—Archives of Pediatrics.*

A NEW OPERATION FOR PARALYTIC TALIPES VALGUS AND THE ENUNCIATION OF A NEW SURGICAL PRINCIPLE.

THE observations and researches of Parish led him to believe that in not more than two or three per cent. of the cases where the anterior tibial is paralyzed is the extensor longus pollicis also involved. In cases where the anterior tibial was paralyzed, or so near so that it could not perform its function after careful and prolonged treatment by electricity, massage, etc., the idea occurred to him that the strong extensor pollicis might be able to bear part or all of the burden of its weaker neighbor. Experiments on the cadaver seemed to prove that this principle was correct, therefore on May 15, 1892, the first operation was done. The patient, a girl aged three years and ten months, had infantile paralysis when eleven months old. At the time of operation both tibial muscles of the right leg were completely paralyzed, giving rise to talipes valgus. All the other muscles which had been involved had recovered. The foot could easily be put in the correct position. The extensor pollicis was moderately strong.

Under chloroform anæsthesia, an incision was made over the space between

the tendons of the anterior tibial and extensor pollicis muscles, extending from the annular ligament three inches or three inches and a half upward. Both the tendons were found and isolated. The tendon sheaths were cut away and the foot was inverted and extended so as to shorten up the tendon of the anterior tibial and pull down the tendon of the extensor pollicis. The opposing tendon surfaces were then freshened with the knife and then sewed together with a catgut suture for a space of an inch or more, and the wound was closed. The foot was then moulded into the proper position, and retained there by a plaster of Paris bandage, which was worn for a month. It is now too early to state the final outcome of the case.

In some cases a better result may be obtained by cutting off the tendon of the extensor pollicis and sewing it on the common extensor of the toes, and then cutting the anterior tendon and uniting the proximal end of the extensor pollicis to the distal end of the anterior tibial, thereby allowing the extensor pollicis only the function of the anterior tibial muscle. In cases where the posterior tibial is also paralyzed it may be necessary to sew its tendon fast to the tendo Achilles. *However, the important principle of grafting tendons and having a live muscle do the work of a dead one* is that which is particularly desired to establish in this article. This live muscle may also do its own work in addition to that of its neighbor, or it may have its original function transferred to still another muscle.

This principle may be used in other deformities, where the muscles of the calf are paralyzed, thus giving rise to paralytic talipes calcaneus. We may sew the tendo Achilles to the tendon of the posterior tibial, provided that muscle is good and strong, or it may be attached to either the flexor longus pollicis or the flexor longus digitorum, with a reasonable hope of materially benefiting the patient. Should the common extensor of the toes alone be paralyzed, its tendons might be grafted to the extensor pollicis, to the anterior tibial or to both. In other cases, too, the principle may be employed.—*Archives of Pediatrics.*

MEDICAL MELANGE.

SULFONAL IN SEASICKNESS.—According to an English confrere, Dr. J. Donellan, of Hurst (formally a physidian on one of the transatlantic lines), sulfonal is the best means with which to prevent or combat seasickness. The medicament should be taken in the usual hypnotic doses as soon as the passenger has stepped aboard of the vessel, and a further dose as soon as any uneasy feeling arises which would indicate the presence of seasickness.—*La Semaine Medicale*, September 28, 1892.

THIS is the method proposed, by the *University Medical Magazine*, for lessening the cost of prescriptions: "Let each county medical society establish in its larger towns a series of prescription-filling depots in which nothing would be dispensed to the public but the prescriptions put up by the order of the physicians of the town who are members of the society. Such prescriptions could be sold at such a rate that a sufficient profit could be made to pay for efficient clerk-hire, the rent of the building, the cost of the drugs, and running expenses. To make such a plan a success, of course, all the members of such a county medical society resident in these towns would be obliged to use such depots."

ASCITES IN ITS RELATION TO GYNECOLOGY.—Gusserow (*Archiv für Gynecologie*) divides cases of ascites which come under the observation of the abdominal surgeon into four classes—those due to tuberculosis, to papilloma of the ovaries, to malignant disease of the ovaries and peritoneum, and to non-malignant conditions of the genital organs. He proves by numerous cases that it is impossible to make a positive diagnosis by means of explorative puncture alone, and pleads for the explorative incision instead, as being equally harmless. Moreover, it is frequently found when the finger is introduced that the cause of the ascites is removable, and that the patient can be cured at once by removal of the neoplasm.—*American Journal of the Medical Sciences.*

PHENOCOLL IN THE TREATMENT OF MALARIA.—Phenocoll, a derivative of phenacetine, has been tried by P. Albertoni (*Da Riforma Medica*, February 5, 1892; *Revue de Thérapeutique Générale et Thermale*, June 5, 1892) in thirty-four cases of malaria. A permanent cure was obtained in twenty-four; in five the results were doubtful; and in the other five the drug failed to do any good. Some of the patients cured by phenocoll had suffered severe relapses after treatment with quinine. Phenocoll was given, in form of powder, in doses of fifteen grains (one gramme), six or seven hours before the expected paroxysm, and after the disappearance of the paroxysms, to prevent relapses, the medicament was continued for some time. The new remedy has no unpleasant after-effects, and the taste is easily disguised by mixing it with sugar. In this manner children take it readily.—*University Medical Magazine*, September, 1892.

AN absurd and unjust legal estimate of the value of medical services was recently made by Judge Levy, of San Francisco. Dr. C. N. Ellinwood presented a claim against the estate of millionaire Walter S. Hobart for professional services rendered the deceased husband and wife. Mr. Hobart received medical attention for eight months, and Mrs. Hobart for a period of four months. The physician rendered a bill for thirty thousand dollars. The judge considered the charge exhorbitant, rendering his decision in the following terms: * * * "Although inexperienced in the charges of medical gentlemen for professional services, I am at a loss to recall a case where such an amount has been charged. I am of the opinion that the services rendered for one year's time were not of the value of thirty thousand dollars, but a fair, reasonable, and just compensation would be ten thousand dollars, for which amount this claim is allowed."

ONE DOLLAR COMMISSION.—Not long ago, and possibly at present, one or two drug-stores of a large American city kept a series of Yale-locked boxes behind the perscription counter, each marked with the name of a physician of the city. The boxes had a slot sufficiently large to admit a silver dollar, which, wrapped in the perscription, was placed in the box, when, by the careful direction of the writer, the patient had been piloted to the store. The special key was carried by the honorable gentleman whose professional card was upon the box. If this seems ancient history, there lies before us a personal letter to a Philadelphia physician, dated September 30, 1892, in which, with blank order-checks, etc., at command, a "mineral spring" company offers to give the physician one dollar for "each order, at five dollars cash with order, you send or cause to be sent to us," for a dozen bottles of the medicinally and miraculously potent water. "It must not be understood as a discount allowed to your patient."—*Medical News.*

HENRY GEORGE discusses the propriety and justice of druggists' prices in the following manner: "When I go to a druggist's and buy a small quantity of medicine or chemicals, I pay many times the original cost of those articles, but what I thus pay is in much larger degree wages than profit. Out of such small sales the druggist must get not only the cost of what he sells me, with other costs incidental to the business, but also payment for his services. These services consist not only in the actual exertion of giving me what I want, but in waiting there in readiness to serve me when I choose to come. In the price of what he sells me he makes a charge for what printers call 'waiting time;' and he must manifestly not merely charge waiting time for himself, but also for the stock of many different things only occasionally called for, which he must keep on hand. He has been waiting there with his stock in anticipation of the fact that such persons as myself, in sudden need of some small quantities of drugs or chemicals, would find it cheaper to pay him many times their wholesale cost than to go farther and buy larger quantities. What I pay him, even when it is not payment for the skilled labor of compounding, is largely a payment of the same nature as, were he not there, I might have had to make to a messenger."

TREATMENT OF GONORRHŒA.—Mr. Jonathan Hutchinson, in the *Archives of Surgery*, states that he employs the same remedies in almost every case, without regard to the stage or severity of the disease. He says: "I have long ago laid aside the traditions of my student days which taught that salines only should be used in the acute stages, and that abortive measures were dangerous. I always use abortive measures and mostly, I believe, succeed. At any rate I never encounter ill consequences and complications are rare. My prescription is a partnership of three different remedies, and it is, I believe, important that they should all be used. First, an injection of a solution of chloride of zinc, two grains to an ounce; next, sandal-wood oil capsules, and lastly, a purgative night dose with bromide of potassium. The injection is used three or four times a day, the capsules (ten or twenty minims) taken three times a day. The ingredients of the night dose are three drachms of epsom salts and half a drachm of bromide of potassium." Mr. Hutchinson considers that it is the use of the bromide of potassium, in preventing congestion of the parts, that renders the abortive treatment safe. Moderate purgation and entire absence of stimulants are essential. If the patient be well purged, Mr. Hutchinson considers that there is no risk in the abortive treatment from the day he comes under treatment.—*Canadian Practitioner.*

ZOLA ON AMPUTATION AT THE SHOULDER-JOINT.—M. Zola, in his novel, "The Downfall," gives a dramatic description of a surgical operation: "The business that lay before him now was the resection of the shoulder-joint in accordance with Lisfranc's method, which surgeons never fail to speak of as a very pretty operation, something neat and expeditious, barely occupying forty seconds in performance. The patient was subjected to the influence of chloroform, while an assistant grasped the shoulder with both hands, the fingers under the armpit, the thumbs on top. Bouroche, seizing the long, keen knife, said, 'Raise him!' seized the deltoid with his left hand and with a swift movement of the right cut through the flesh of the arm and severed the muscle; then, with a deft rearward cut, he disarticulated the joint at a single stroke, and presto! the arm fell on

the table, taken off in three motions. The assistant slipped his thumbs over the brachial artery in such a manner as to close it. 'Let him down!' Bouroche could not restrain a pleased look, as he proceeded to secure the artery, for he had done it in thirty-five seconds. All that was left to do now was to bring a flap of skin down over the wound and stitch it, in appearance something like a flat epaulette. It was not only 'pretty,' but exciting, on account of the danger, for a man will pump all the blood out of his body in two minutes through the brachial, to say nothing of the risk there is in bringing a patient to a sitting posture when under the influence of anæsthetics."—*Medical Record.*

SIMPLE TESTS FOR IMPURITIES IN WATER.—The following methods of determining the presence of impurities in water are given by Walling (*Pharmaceutical Era*): (1) For organic matter, put a little of the sample into a beaker, add two or three drops of dilute sulphuric acid and color distinctly with a solution of permanganate of potassium. If much organic matter is present the color of the permanganate becomes discharged almost immediately; if less or very little, it takes longer to decolorize. If the color has not changed in twenty-five or thirty minutes it is safe to assume that organic matter was not present. This is a tolerably reliable test. (2) For nitrites, a little sulphuric acid added to the water forms nitrous acid if nitrites are present, which is easily detected by its power of liberating iodine from iodide of potassium. A little starch paste is mixed with a small quantity of a solution of potassium iodide, and the mixture added to the suspected water containing the sulphuric acid. If nitrites are present the nitrous acid formed liberates the iodine from the iodide, which turns blue with starch. This indirect method is a ready means for detecting the nitrites if present in not too small quantity. (3) Nitrates are detected by converting into nitric acid, which turns morphia red. A portion of the water is evaporated to dryness, the residue treated with a drop of strong sulphuric acid (which makes nitric acid of the nitrate) and a portion of morphine added. If nitrate is present the morphine gives red color. (4) For ammonia, Nessler's reagent is by far the best test. It may be made by dissolving eighteen grains of oxide of potassium in a little water, adding solution of mercuric chloride until the red iodide of mercury first formed redissolves upon agitation. To this is added a solution of fifty grains of caustic potassa and distilled water to make eight ounces. This reagent will detect 0.00375 of a grain in a pint of water by giving a yellow color. A reddish color or precipitate forms with larger quantities of ammonia. (5) Albuminoid matter requires a more elaborate proceeding for its detection. If all of the above were found it is hardly necessary to go to the trouble of looking for albuminoids; the water would be unwholesome even if they were not present.

COMMERCIAL MEMORANDA.

AFTER a fair trial in mild and severe cases, I find that the Anderson antiseptic vaginal capsules more than meet my expectations as a means of applying and retaining dressings, etc., to the neck of the uterus and the vaginal walls. I would cheerfully advise physicians to give them a trial, as they furnish a means of treating and supporting the relative parts without causing irritation, and can be readily removed and replaced by patients without danger.—F. C. Robinson, M. D., New York city.

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